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The EDISON ELECTRIC INSTITUTE BULLETIN

March
1959

Electric and Gas Utility Accounting Conference

EEI's Annual Sales Conference

New Division Committees Hold Meetings

What I Expect from Industrial, Commercial Salesmen

Henry M. Turrell

Published by Edison Electric Institute

ELECTRICAL RESEARCH STATISTICS
THE ELECTRIC LIGHT AND POWER INDUSTRY

Current Statistical Data Covering 100 Per Cent of Industry

(Includes Investor-Owned Companies, Cooperatives, and Government-Owned Utilities)

December 1957-1958

SOURCE AND DISPOSAL OF ENERGY—MONTH OF DECEMBER

	1958	1957	%
NET GENERATION* (Kwhrs in Thousands)			
By Fuel Burning Plants	48,458,394	41,658,242	+16.3
By Water Power Plants	10,752,610	12,473,187	−13.8
Total Generation	**59,211,004**	**54,131,429**	**+ 9.4**
ADD—Net Imports Over International Boundaries	274,556	339,370	−19.1
Less—Company Use	177,011	157,842	+12.1
Less—Energy Used by Producer	1,700,157	1,530,853	+11.1
Net Energy for Distribution	**57,608,392**	**52,782,104**	**+ 9.1**
Lost and Unaccounted for	7,270,985	5,720,433	+27.1
Sales to Ultimate Customers	**50,337,407**	**47,061,671**	**+ 7.0**

CLASSIFICATION OF SALES

NUMBER OF CUSTOMERS—As of December 31st			
Residential or Domestic	47,788,587	46,857,066	+ 2.0
Rural (Distinct Rural Rates)	1,634,348	1,635,227	− 0.1
Commercial or Industrial:			
Small Light and Power	6,281,076	6,186,701	+ 1.5
Large Light and Power	315,410	308,751	+ 2.2
Other Customers	189,070	183,344	+ 3.1
Total Ultimate Customers	**56,208,491**	**55,171,089**	**+ 1.9**
KILOWATTHOUR SALES—During Month of December (Kwhrs in Thousands)			
Residential or Domestic	14,419,531	13,553,049	+ 6.4
Rural (Distinct Rural Rates)	791,146	729,803	+ 8.4
Commercial or Industrial:			
Small Light and Power	8,564,322	7,931,565	+ 8.0
Large Light and Power	24,449,090	22,910,716	+ 6.7
Street and Highway Lighting	559,617	516,425	+ 8.4
Other Public Authorities	1,126,503	1,011,998	+11.3
Railways and Railroads:			
Street and Interurban Railways	208,961	198,223	+ 5.4
Electrified Railroads	162,653	163,394	− 0.5
Interdepartmental	55,584	46,498	+19.5
Total to Ultimate Customers	**50,337,407**	**47,061,671**	**+ 7.0**
Revenue from Ultimate Customers (Thousands)	**$848,962**	**$798,014**	**+ 6.4**

RESIDENTIAL OR DOMESTIC SERVICE

AVERAGE CUSTOMER DATA—for 12 months ended December 31, 1958			
Kilowatthours per Customer	3,366	3,174	+ 6.0
Average Annual Bill	$85.16	$81.25	+ 4.8
Revenue per Kilowatthour	2.53¢	2.56¢	− 1.2

* By Courtesy of the Federal Power Commission.

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The objectives of the Edison Electric Institute are:

The advancement in the public service of the art of producing, transmitting, and distributing electricity and the promotion of scientific research in such field.

The ascertainment and making available to the members and the public of factual information, data, and statistics relating to the electric industry.

To aid its operating company members to generate and sell electric energy at the lowest possible price commensurate with safe and adequate service, giving due regard to the interests of consumer, investor, and employee.

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The EDISON ELECTRIC INSTITUTE BULLETIN

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CONVENTIONS AND MEETINGS

1959

MARCH

26-27 Oklahoma Utilities Association Annual Convention, Mayo Hotel, Tulsa, Okla.
27-29 Pacific Coast Electrical Association Board of Directors Meeting, Bass Lake, Calif.
30-31 Pacific Coast Electrical League Engineering and Operating Conference, Hotel Lafayette, Long Beach, Calif.

APRIL

6- 8 EEI 27th Annual Convention, New Orleans, La.
6- 9 EEI-AGA 18th Annual Conference on Operation of Public Utility Motor Vehicles, Netherland Hilton Hotel, Cincinnati, Ohio
8- 9 Joint ASME-AIEE Railroad Conference, Sheraton Hotel, Chicago, Ill.
8- 9 Pacific Coast Electrical Association Administrative Services Conference, Hotel Lafayette, Long Beach, Calif.
9-10 PEA Meter Committee, Philadelphia, Pa.
19 The Maryland Utilities Association Annual Business Conference, Lord Baltimore Hotel, Baltimore, Md.
15-17 Missouri Valley Electric Association Engineering Conference, President Hotel and Municipal Auditorium, Kansas City, Mo.
16-17 EEI Electric Power Survey Committee, EEI Headquarters, New York City, N. Y.
16-17 Southeastern Electric Exchange Engineering & Operation Section, Spring Meeting, Belleview Biltmore Hotel, Belleair, Fla.
19-21 Rocky Mountain Electrical League Annual Spring Work Conference, Continental Denver Motor Hotel, Denver, Colo.
20-22 EEI-AGA National Conference of Electric and Gas Accountants, Sherman Hotel, Chicago, Ill.
22-25 NELPA Engineering & Operation Section with Personnel & Safety Section, Purchasing Committee, Hotel Utah, Salt Lake City, Utah
23-24 Southeastern Electric Exchange Accident Prevention Committee, Hotel Arlington, Hot Springs, Ark.
27-29 EEI Meter & Service Committee, Chase Hotel, St. Louis, Mo.
30-May 1 EEI Statistical Committee, Dearborn Inn, Detroit, Mich.
30-May 1 PEA Structures & Hydraulics Committee, Pittsburgh, Pa.
30-May 1 PEA Transmission & Distribution Committee, Pocono Manor Inn, Pocono Manor, Pa.
30-May 1 PIP Youth Conference on the Atom, The Claridge Hotel, Atlantic City, N. J.

MAY

4- 5 PEA System Planning Committee, Greensburg, Pa.
4- 6 EEI Prime Movers Committee, Palmer House, Chicago, Ill.
4- 6 EEI Purchasing and Stores Annual Meeting, Hotel Soreno, St. Petersburg, Fla.
6- 8 PUAA Annual Convention, Sheraton Hotel, Dallas, Tex.
7- 8 EEI Industrial Relations Committee joint with Personnel Committee of the Ohio Electric Institute, Netherlands Hilton Hotel, Cincinnati, Ohio
7- 8 EEI Transmission & Distribution Committee, Shoreham Hotel, Washington, D. C.
7- 8 PEA Electrical Equipment Committee, Bedford Springs, Pa.
11-13 Hydraulic Power Committee, Arrowhead Lodge, Lake Ozark, Mo.
12-13 Indiana Electric Association Young Men's Utility Conference, Purdue University, Lafayette, Ind.
13-15 New Jersey Utilities Association Spring Meeting, Seaview Country Club, Absecon, N. J.
14-15 PEA Relay Committee Meeting, Irem Temple Country Club, Dallas, Pa.
18-20 NELPA Business Development Section, Advertising & Public Relations Committee, & Rate Research Committee, Multnomah Hotel, Portland, Ore.
19 Pacific Coast Electrical Association Board of Directors Meeting, San Francisco, Calif.
20-22 Pacific Coast Electrical Association Annual Convention, Fairmont Hotel, San Francisco, Calif.
25-26 EEI Electrical System & Equipment Committee, Roosevelt Hotel, Pittsburgh, Pa.

JUNE

4- 6 NELPA Accounting & Business Practice Section, Finlen Hotel, Butte, Mont.
7- 9 Wisconsin Utilities Association Accounting Section Convention, Lake Lawn Lodge, Delavan, Wis.
22-23 Michigan Electric Association Annual Meeting, Mackinac Island, Michigan.
22-26 Air Pollution Control Association Annual Meeting, Hotel Statler, Los Angeles, Calif.
24-26 Canadian Electrical Association Annual Convention, Manoir Richelieu, Murray Bay, Que.
25-26 EEI-AGA Depreciation Accounting Committees, Chatham Bars Inn, Chatham, Mass.

JULY

6- 8 EEI Accident Prevention Committee, Biltmore Hotel, Los Angeles, Calif.

SEPTEMBER

11-12 The Maryland Utilities Association Annual Fall Conference, The Cavalier, Virginia Beach, Va.
14-15 EEI-AGA 1959-1960 Accounting Division & Section Organization Meetings, Hotel Cleveland, Cleveland, Ohio
16-17 PIP Workshop Conference, Warwick Hotel, Philadelphia, Pa.
17-19 Public Utilities Association of the Virginias 41st Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.
21-23 EEI Industrial Relations Committee Twelfth Annual Round Table Conference, Drake Hotel, Chicago, Ill.
24-25 Missouri Valley Electric Association Accounting Conference, President Hotel, Kansas City, Mo.
28-30 NELPA 52nd Annual Meeting, Hotel Vancouver, Vancouver, B. C.
30-Oct. 1 PEA Annual Meeting, Philadelphia, Pa.

OCTOBER

7- 9 Missouri Valley Electric Association Sales, Rural & Home Service Conference, President Hotel, Kansas City, Mo.
7- 9 Indiana Electric Association Annual Convention, French Lick-Sheraton Hotel, French Lick, Ind.
12-15 NARUC Convention, Bellevue-Stratford Hotel, Philadelphia, Pa.
14-16 Wisconsin Utilities Association Operating & Sales Convention, Schroeder Hotel, Milwaukee, Wis.
15-16 Southeastern Electric Exchange Engineering & Operation Section, Fall Meeting, Biltmore Hotel, Atlanta, Ga.
22-23 EEI Statistical Committee, The Homestead, Hot Springs, Va.
22-23 Southeastern Electric Exchange Accounting Conference, Shoreham Hotel, Washington, D. C.
25-29 Rocky Mountain Electrical League 56th Annual Fall Convention, Broadmoor Hotel, Colorado Springs, Colo.

NOVEMBER

4- 6 New Jersey Utilities Association Annual Meeting, Seaview Country Club, Absecon, N. J.
5- 6 Pacific Coast Electrical Association, Hawaiian Conference, Matson House, Honolulu, Hawaii.
16-18 Southeastern Electrical Exchange Sales Section, Roosevelt Hotel, New Orleans, La.

Liberalized depreciation, effective techniques in work measurement programs, new concepts in customer relations will be discussed at Accounting Conference, to be held in Chicago, Ill., April 20-22

National Conference of Electric and Gas Utility Accountants

A WELL-BALANCED program covering management problems of particular concern to chief accounting officers has been planned for the National Conference of Electric and Gas Utility Accountants in Chicago, April 20-22.

The three-day conference, to be held at Hotel Sherman, will be sponsored by the EEI Accounting Division, under the Chairmanship of B. J. McMillen, The Cincinnati Gas & Electric Co., and the American Gas Association Accounting Section, under the Chairmanship of J. Gordon Ross, Rochester Gas and Electric Corp. Speakers prominent in their various areas of activity will discuss the economic effects of liberalized depreciation, the most effective techniques in work measurement programs, new concepts in customer relations, effects on employees of electronic data processing and many other subjects of importance.

General Session on April 20

The General Session will be held on Monday, April 20, from 10 a.m. to 12 noon. At this session Gordon R. Corey, Vice President, Commonwealth Edison Co., and Leslie A. Brandt, Vice President and Comptroller, The Peoples Gas Light and Coke Co., will welcome the accounting representatives. Edwin Vennard, Vice President and Managing Director of EEI, and J. Theodore Wolfe, President of AGA and President of Baltimore Gas and Electric Co., will speak on behalf of the associations. Neal J. Dean, of Booz, Allen and Hamilton, management consultant firm, will discuss "Obsolescence of Electronic Data Processing Equipment and Systems —Real or Fancied," and Dr. Leland P. Bradford, Director, National Training Laboratories, will address the group on "Measuring and Improving Organizational Performance."

Meetings of the Customer Activities Group and General Activities Group have been scheduled at 2 p.m. Monday, April 20. The Customer Activities Group will meet again on Tuesday, April 21, at 2 p.m., and the General Activities Group will meet again on Wednesday, April 22, at 9:30 a.m. General Activities Group committees in two sessions—General Accounting-Taxation Accounting and Plant Accounting-Depreciation Accounting—will meet at 9:30 a.m., April 21. The General Accounting Committee and Internal Auditing Committee of the General Activities Group will meet at 2 p.m., April 21.

The highlights of the Accounting Conference program follow.

The General Activities Group has arranged a program which is expected to be of value to all electric utility companies. The Depreciation Committee will present a discussion of economic effect of liberalized depreciation. The General Accounting and Internal Auditing Committees will offer reports on industry practices and case studies in work measurement. The importance of closing tax cases, as well as the importance of tax awareness outside the tax department, are the main subjects to be presented by the Taxation Accounting Committee. Getting the most out of property records and accounting for underground natural gas storage will be the major subjects of the Plant Accounting and Property Records Committee. In addition, each of the committees will offer papers and discussions of other important matters concerning taxes and the general accounting field.

Participants in the liberalized depreciation discussion will include Prof. William A. Paton, University of Michigan; John F. Childs, Vice President, Irving Trust Co.; George T. Logan, Philadelphia Electric Co.; Barnard Morse, Southern California Edison Co.; Malcolm G. Davis, Gilbert Associates; Arthur H. Kuhn, Pioneer Service Engineering Company; Cortis N. Rice, Jr., Northern States Power Co.; John B. Madigan, The Hartford Electric Light Co.; and C. N. Ostergren, American Telephone & Telegraph Co. The panel will be moderated by Allan G. Mitchell, Philadelphia Electric Co.

Depreciation Decisions to Be Reviewed

Recent court and commission decisions on depreciation will be reviewed at a General Activities Group session on Tuesday morning, April 21, by Carl P. Allman, The Detroit Edison Co.

The Customer Activities Group meeting on April 20 will feature a skit depicting the evolution of customer accounting systems and the effects of electronic ac-

counting systems on customer's activities. Also scheduled for this session are a discussion of "The Organization and Management of a Data Processing Department" by James Gibbons, Price Waterhouse & Co., and a progress report on the prospects of automatic meter reading. On April 21, the meeting will feature a panel discussion under the title, "Collections Are Everybody's Business." The discussion will be moderated by Gerald A. Wilson, Public Service Electric and Gas Co. Panel members will include Halsey J. Carr, Consolidated Edison Co. of New York, Inc.; William J. Kelly, Philadelphia Electric Co.; Ralph E. Lindner, Central Illinois Public Service Co.; Rodney W. Reamy, Washington Gas Light Co.; and Melvin G. Wuest, The Cincinnati Gas & Electric Co. Joseph H. Purdy, Baltimore Gas and Electric Co., will speak on "Customer Information—What, When and How."

At individual committee meetings or at other meetings of the General Activities Group, the following subjects will be discussed:

Depreciation Accounting Committee — H. Frank Carey, Long Island Lighting Co., and Joseph F. Brennan, Pacific Gas and Electric Co., will evaluate "Methods of Calculating Current Depreciation Accruals and Reserve Requirements."

General Accounting Committee—"Application of Electronics to General Accounting," "Development of Utility Accountants," "Work Measurement Applications," and "New Accounting Developments" will be discussed. Additional projects include protection of vital records and overhead costs.

Committee Plans

Internal Auditing Committee—A panel discussion on "What's Your Audit Problem?" and a "work shop" discussion on internal auditing are scheduled. "Are You Getting the Full Measure?" is the title of the address to be presented by Earl J. DeChambeau, West Penn Power Co. Charles J. Nichols, Baltimore Gas and Electric Co., will describe a work measurement program for appliance servicing operations.

Plant Accounting and Property Records Committee —"Accounting for Property Damaged by Major Storms," "Liberalized Depreciation and the Property Accountant," "Atomic Energy Plant Life," and "Getting the Most Out of Property Records" are the titles of addresses to be presented. In addition, there will be a 2½-hour audience participation session in which a panel will give its views on plant accounting problems.

At individual committee meetings or at other meetings of the Customer Activities Group, the following subjects will be discussed:

Accounting Division Customer Relations Committee —A study of contact employee training programs dealing with methods now in use and new ideas gathered from a large number of utilities will be presented. Other subjects will include techniques of settling high bill inquiries, estimating meter readings and billing and customer information.

Customer Accounting Committee timely subjects have been selected for presentation by this committee. There will be a panel discussion of "Trends in Maintaining Customer Accounting Records and Furnishing Information Therefrom." Also to be discussed are meter history records, budget and billing procedures, application of electronics to customer accounting, application of meter constants and correction factors.

Customer Collections Committee—"The Credit Picture," "Use of Collection Agencies for Closed Accounts" and "Field Collections" will be presented on April 21. On the morning of April 22, the entire session will be utilized by "What Price Protection," an open discussion of current accounts receivable problems and new practices instituted by utilities in an effort to reduce losses.

Accounting Employee Relations Committee—The importance of good relations between different departments, promotion from within, potential use of women as supervisors and what to do with excess people after installation procedure are the topics scheduled for discussion on April 21. The April 22 session will be devoted to an accounting employee problems clinic.

The ladies program will include a sightseeing bus trip to the Haeger Potteries in Dundee, Ill., on Tuesday, April 21. Buses will leave the Sherman Hotel at 9:30 a.m. Luncheon is to be served at the Milk Pail Restaurant. The Conference Dinner will be held on the evening of April 21 in the Grand Ballroom of the Hotel Sherman, beginning at 7 o'clock. Exhibits by eight manufacturers of the newest accounting machines and office equipment will be on display.

First National Youth Conference on the Atom Announced

A NATIONAL Youth Conference on the Atom, the first such meeting of high school science students and teachers to discuss the peaceful uses of nuclear energy, will be held in Atlantic City, N. J., April 30-May 1.

Approximately 500 junior and senior high school science students and teachers will be sponsored in attendance at the conference by 60 or more electric utility companies throughout the country.

Organizations cooperating in the conference include the American Association for the Advancement of Science, Atomic Industrial Forum, Future Scientists of America Foundation, National Science Foundation, National Science Teachers Association, and Science Clubs of America. E. M. Naughton, President and General Manager, Utah Power & Light Co., is General Chairman of the conference.

The two-day conference at Atlantic City's Claridge Hotel is being held to inform students and teachers about the many uses of the peacetime atom, and to help advance interest in the study of science.

Chairman John A. McCone of the Atomic Energy Commission will address the conference on April 30.

Also speaking will be Dr. Norman C. Hilberry, Director of the Argonne

(*Continued on page* 79)

Accepting EEI Commercial Sales Promotion Awards for their companies are, from left: George H. Hill, Arizona Public Service Co., Class B; H. R. Jones, West Penn Power Co., Class A; and John F. Eichorn, Suburban Electric Co., Class C. M. C. Albrittain is Chairman of Awards Committee.

Accepting EEI Industrial Sales Promotion Awards for their companies are, from left: F. F. Dickmann, West Penn Power Co., Class A; John F. Eichorn, Suburban Electric Co., Class C; and Firman R. Knipp, The Dayton Power and Light Co. Mr. Albrittain also presented the awards to the winners.

Vigorous New Approach to Selling Presented at Sales Conference

A VIGOROUS new approach toward selling electricity in the growing competition for the energy dollar was presented to nearly 1,000 electric company sales executives in Chicago this month.

E. O. George, Chairman of the EEI Commercial Division Executive Committee, declared at the 25th EEI Annual Sales Conference at Chicago's Edgewater Beach Hotel, March 9-12, that the industry must undertake aggressive planning in order to *sell* electricity. "There's only one answer—and that is selling—selling in the face of alert, aggressive competition," he said.

J. E. Corette, President of EEI and President of The Montana Power Co., pointed out that any increase in sales of electricity will be in direct proportion to the increased effort on the part of the people who are selling it. In addition, Mr. Corette suggested that the industry join together in a campaign of economic education to sell free enterprise.

"The great task facing us in 1959 is just this: to recreate in America the kind of economic atmosphere needed for us to do our jobs best," Mr. Corette said. "In order to continue providing the best possible service to our customers, we of the electric industry must have an atmosphere of free enterprise in which to work."

He added that "we have come to realize that we must sell our free-enterprise system as well as our product. We know that the very existence of our industry depends on this."

Paul W. Emler, Vice President, American Electric Power Service Corp., proposed that the industry set a goal of 20,000,000 electrically heated homes by 1979. With 30,000,000 homes to be constructed in the next 20 years, he said, the industry should plan to have 50 per cent of these new homes electrically heated.

Twelve Sales Promotion Awards in four categories were presented to companies judged outstanding in promoting increased use of electricity. This was the second year of the EEI-sponsored contest and M. C. Albrittain, Chairman, EEI Awards Committee, said entries this year indicated the active interest shown by utilities in combatting the local pressures of the 1958 recession.

Accepting EEI Residential Sales Promotion Awards for their companies are, from left: E. H. Gardiner, Jr., Texas Power and Light Co., Class A; C. W. Ailstock, Florida Power Corp., Class B; and Harry W. Carloss, Old Dominion Power Co., Class C. M. C. Albrittain, EEI Awards Committee Chairman, is shown with them. These were the second annual awards.

The chief instrument in selling more electricity is EEI's National Electric Living Program which was launched in February. The three-part program, designed to sell more appliances, improve home electrical wiring and sell more and better lighting, will be backed up in 1959 with a $2,600,000 advertising budget. Advertising is being concentrated in daytime television programming, magazines and point-of-purchase material.

In the opening address of the conference, Mr. George, who is Vice President, The Detroit Edison Co., set goals for the next decade in the residential and rural, industrial and commercial areas of the industry.

"We would like to see residential and rural kwhr consumption jump from 160 billion in 1958 to 415 billion in 1968," he told the group. "The challenge here is to achieve this increase by selling electric heating in ever-increasing amounts," he added.

His projected goal also called for 620 billion kwhr in the industrial market by 1968, compared to 275 billion kwhr last year, and 225 billion kwhr in the commercial field in 1968, compared to 100 billion kwhr in 1958.

Healthy Competition Welcomed

Asserting that the investor-owned electric utility industry welcomes healthy, legitimate competition, Mr. Corette said that "as we compete with other forms of energy and as we compete with the rest of American industry for a share of the consumer's dollar we know that, in the final analysis, it is the consumer who benefits."

"But the hard fact is that the chief competition facing our companies is not of this kind," he added. "This chief competitor of ours is the government."

Mr. Corette emphasized that it is of vital importance that the people in the sales end of the business have a clear picture of what the industry has accomplished, what it plans for the future, and what its chief problems are. He said the sales representative, along with the actual serviceman, is the most important contact between his company and the public. "For years I have thought that in many organizations his importance was not adequately recognized," the EEI President said. "I am glad to say that the situation seems to be improving, for the function of the man in sales is becoming increasingly important."

Electric Heating Promising

Explaining that if it were possible to reach the saturation figure of 100 percent for electric ranges, water heaters and clothes dryers, the average residential use would probably not exceed 7,000-8,000 kwhr a year, Mr. Emler pointed to electric heating as the most promising factor in increasing loads.

"If we promote and sell electric heating," he said, "we can set our sights on an average use of 10,000 kwhr per year per customer as a reasonable, relatively immediate goal and can put 20,000 kwhr per year per customer on the horizon as . . . near perfection."

Some of the reasons suggested by Mr. Emler for promoting electric heating are as follows:

- Growth is important and necessary to the well-being of the electric utility industry, and electric heating can provide a major part of that growth.
- It will have a balancing effect on the summer-winter and the day-night load pattern.
- The heating business is essential if the industry is to protect and increase the residential appliance market.

Mr. Emler said that by the end of 1958 there were about 500,000 homes electrically heated in the United States. "More than half a million of our customers are now familiar with the advantages of electric heating because they are either using heat pumps or resistance heating," he said. "The 'dream stage' of electric heating promotion has passed. Electric heating is here—now!" he declared.

Twenty million heating customers, according to Mr. Emler, would give the industry 300 billion kwhr of new business—"business that we won't have if we don't sell electric heating."

In order to develop this growing market, he suggested that complacency be avoided by not letting the initial success "go to our heads;" and by establishing the value of electric heating in the public mind; helping in dealer development; continuing cooperation with manufacturers and paying attention to the conversion market.

The Sales Promotion Contest plaques were given in four major categories—Commercial, Industrial, Residential and Farm. Each category was divided into three classes. For the Commercial, Industrial and Residential categories, the classes were: Class A for companies with 300,000 or more customers; Class B for companies with 100,000 to 300,000 customers, and Class C for companies with less than 100,000 customers. In the Farm category, classes were: Class A for companies with 30,000 or more farm customers; Class B for companies with 15,000 to 30,000 farm customers, and Class C for companies with less than 15,000 farm customers.

For carrying out utility sales programs to develop the commercial market for electric light, heat and power, these awards were presented:

Class A—West Penn Power Co.

Class B—Arizona Public Service Co.

Class C—Suburban Electric Co.

For carrying out promotional programs resulting in increased industrial production, improved products and working conditions through electrical usage, awards were presented in the Industrial contest as follows:

Class A—West Penn Power Co.

Class B—The Dayton Power & Light Co.

Class C—Suburban Electric Co.

Residential awards were presented to recognize outstanding promotional programs fostering the modern electric way of living. These awards were presented:

Class A—Texas Power & Light Co.

Class B—Florida Power Corp.

Class C—Old Dominion Power Co.

Farm market awards were offered in recognition of outstanding programs promoting increased use of electricity on farms. These awards were presented:

Class A—Pacific Gas and Electric Co.

Class B—Indiana & Michigan Electric Co.

Class C—The Connecticut Light & Power Co.

New Division Committees Hold Meetings

Customer Relations Committee

THE first meeting of the new Customer Relations Committee of the Customer, Employee and Investor Relations Division was held in Chicago, Feb. 18-19, to develop goals and organize subcommittees.

The Committee, headed by Chairman Kimball I. Jack, Vice President, The Washington Water Power Co., defined as a broad objective the "creation of a favorable climate for development and expansion by making friends." Four techniques for making friends were suggested: (1) company policies and procedures oriented toward customer relations; (2) employee education; (3) public information; (4) active participation in civic affairs. It was emphasized that constant measurement would be required to determine the effectiveness of the techniques.

The Customer Relations Committee proposed a specific goal for 1959-60: "To increase by five percentage points the number of people favoring the electric company with which they do business." The latest ECAP survey on the subject shows that in 1957, 56 percent of the population favored investor-owned electric companies.

Emphasis was placed on the importance of cooperating with other EEI committees when working in areas that might overlap theirs.

CHAS. E. OAKES
Chairman of Customer, Employee and Investor Relations Division Executive Committee

Six subcommittees were formed at the meeting and they are now preparing questionnaires and reports in their fields for circulation initially to members of the Customer Relations Committee.

The Subcommittee on Functions will prepare questionnaires in an effort to determine the pattern of customer relations organizations and programs within companies represented on the Committee. The Subcommittee will develop an outline of a how-to-do-it public relations guide book.

The Subcommittee on Attitudes and Measurements will evaluate opinion polls conducted within the last two years by individual companies, to learn why people think as they do, as well as how they think.

The Subcommittee on Communications Research will determine which methods of communications are most effective in influencing customer attitudes. Based on its findings, the group will make recommendations for improving techniques and subject matter.

The Subcommittee on Speakers' Bureaus will determine how individual companies operate speakers' bureaus, how they recruit and train speakers, and what the most popular speech topics are.

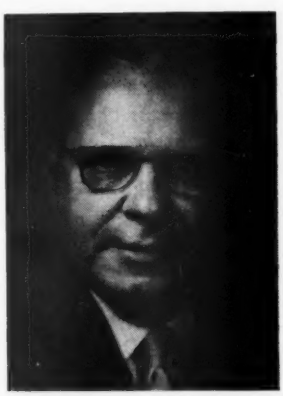
The Subcommittee on Audio-Visual Aids will make a survey of suitable films, film strips, slides and all other audio-visual devices in the field of customer understanding and appreciation.

The Subcommittee on Special Groups will compile a list of groups with which members of the Committee are currently working, and will prepare a set of "before-and-after" questions to determine attitudes of guests during plant tours.

Committee members are listed on

KIMBALL I. JACK
Chairman of the Customer Relations Committee

EDW. J. BRILL
Chairman of the Industrial Relations Committee



LESTER E. REYNOLDS
Chairman of the Investor Relations Committee

this page. The Committee's next meeting will be held in early October.

Industrial Relations Committee

The Industrial Relations Committee, headed by Chairman Edw. J. Brill, Director of Employee Relations of the Pennsylvania Power & Light Co., met March 5-6 in Washington at a joint conference with the Personnel Administration Section of the Southeastern Electric Exchange.

The Committee had met earlier this year, participating in a joint meeting with committees in the same field of the Indiana Electric Association, Pennsylvania Electric Association and the Ohio Electric Utility Institute.

The Committee plans a jointly sponsored meeting in Cincinnati May 7-8 with the Industrial Relations Committee of the Ohio Electric Institute. On Sept. 21 through 23, the Twelfth Annual Round Table Conference will be held at the Drake Hotel in Chicago with the theme, "Your Employee Relations Are Showing."

Investor Relations Committee

The Investor Relations Committee, which is under the Chairmanship of Lester E. Reynolds, Vice President and Treasurer, The Connecticut Light & Power Co., has as its principal purpose keeping EEI member companies apprised of developments relating to the raising of capital by electric companies and relationships between such companies and their security holders.

The Committee held a meeting Dec. 18, at which the program included the following presentations:

The Federal Reserve and the Public Utility Industry, by William F. Treiber, First Vice President, Federal Reserve Bank of New York; An Investment Banker's Viewpoint—Patterns in Security Offerings, by Richard D. Stitzer, General Partner, White, Weld & Co.; Proposed Amendment to Rule 133 of the SEC, by Richard M. Dicke, Simpson, Thacher and Bartlett; Your Company and the Analyst, by James McD. Craven, Analyst, Standard & Poor's Corp.; and Commonwealth Edison's New Dividend Policy, by D. Robert Bower, Treasurer, Commonwealth Edison Co.

The Committee plans a one-day meeting in the Chicago area for the latter part of May.

Members of the Industrial Relations and the Investor Relations Committees are listed on pages 14 and 15 of the second section of the October, 1958, EEI BULLETIN.

Customer, Employee and Investor Relations Division

The activities of the three committees are in line with the EEI Board decision last September authorizing formation of the Customer, Employee and Investor Relations Division. The Executive Committee of this new division consists of Chairman Chas. E. Oakes, Chairman of the Board, Pennsylvania Power & Light Co.; Charles E. Eble, President, Consolidated Edison Co. of New York, Inc.; J. W. McAfee, President, Union Electric Co.; and Walter H. Sammis, President, Ohio Edison Co.

At the Executive Committee meeting in December, Chairman Oakes noted that the new Division was established in recognition of the need for a place in the Institute where member company executives concerned with customer, employee and investor relations could meet for discussion and exchange of information. The Executive Committee provides coordination of the activities of the Division committees and acts as liaison between them and the Board of Directors.

Members of the Customer Relations Committee

Chairman, KIMBALL I. JACK, The Washington Water Power Co., Spokane, Wash.

JOHN I. AHERN, New England Electric System, Boston, Mass.

HOWARD ARNETT, Portland General Electric Co., Portland, Ore.

SCHUYLER F. BALDWIN, Rochester Gas and Electric Corp., Rochester, N. Y.

ROBERT F. BALL, Idaho Power Co., Boise, Idaho

ROBERT H. BRIDGES, The Cleveland Electric Illuminating Co., Cleveland, Ohio

GEORGE R. CONOVER, Philadelphia Electric Co., Philadelphia, Pa.

JOHN C. COSTELLO, Ohio Edison Co., Akron, Ohio

CHARLES B. DELAFIELD, Consolidated Edison Co. of New York, Inc., New York, N. Y.

BEEMAN FISHER, Texas Electric Service Co., Fort Worth, Texas

J. K. FLANAGAN, Florida Power Corp., St. Petersburg, Fla.

E. O. GEORGE, The Detroit Edison Co., Detroit, Mich.

ROBERT H. GROS, Pacific Gas and Electric Co., San Francisco, Calif.

J. MASON GUILLORY, New Orleans Public Service Inc., New Orleans, La.

PAUL V. HAYDEN, The Connecticut Light & Power Co., Hartford, Conn.

HAROLD R. JOHNSON, American Electric Power Service Corp., New York N. Y.

W. S. JOHNSON, Wisconsin Power and Light Co., Madison, Wis.

M. G. KENNEDY, Ebasco Services Inc., New York, N. Y.

D. M. MACKIE, Commonwealth Services, Inc., New York, N. Y.

T. M. MCDANIEL, JR., Southern California Edison Co., Los Angeles, Calif.

DONALD J. MCGOWAN, Consumers Power Co., Jackson, Mich.

I. S. MITCHELL, III, Georgia Power Co., Atlanta, Ga.

MORGAN F. MURPHY, Commonwealth Edison Co., Chicago, Ill.

JAMES F. OWENS, JR., Northern States Power Co., St. Paul, Minn.

EVERETT L. PALMER, Pennsylvania Power & Light Co., Allentown, Pa.

COLIN W. RAFF, The Montana Power Co., Butte, Mont.

JACK RILEY, Carolina Power & Light Co., Raleigh, N. C.

SAM SCHWIEGER, Southwestern Electric Power Co., Shreveport, La.

JAY PAUL WADE, Central Illinois Public Service Co., Springfield, Ill.

ROBERT W. WILSON, Potomac Electric Power Co., Washington, D. C.

DON WILLIS, Arizona Public Service Co., Phoenix, Ariz.

ROBB M. WINSBOROUGH, Middle West Service Co., Chicago, Ill.

What I Expect from
Industrial and Commercial Salesmen

By Henry M. Turrell
General Sales Manager,
Kansas City Power & Light Co.

NEWSPAPER headlines in recent weeks have focused attention on some of our neighboring republics which have been torn apart by internal revolution and, with troubles in Cuba being especially prominent, I am reminded of a quotation by an American editor who has said:

"In all this Cuban business there is one man who stands out on the horizon of my memory like Mars at perihelion."

Puzzled by Perihelion

That last word, perihelion, puzzled me too, and my dictionary says it means the point in orbit where the planet is nearest the sun. Now the writer and newspaperman who penned those words was not referring to any Cuban leader who is alive today. The writer himself has been gone a long time. His name was Elbert Hubbard, and his famous essay, written 60 years ago, of which I already have quoted the opening sentence, goes on to say this:

"When war broke out between Spain and the United States, it was very necessary to communicate quickly with the leader of the insurgents. Garcia was somewhere in the mountain fastness of Cuba—no one knew where. No mail or telegraph message could reach him. The President must secure his cooperation, and quickly."

President Sent Message

McKinley was President of the United States then. The Cuban patriot and revolutionist was Iniguez Garcia, and Hubbard's now-famous essay was "A Message to Garcia," and its very title through the years has become a common expression which symbolizes the efficient completion of a difficult or complicated task. Moreover, to "Carry the Message to Garcia" implies that a person has not only completed an assignment but has done this on his own ingenuity, imagination, resourcefulness, and courage. But let us hear a little more of what Hubbard has to say about this, and remembering our President deemed it imperative that a message get through to Garcia in the mountain wilderness of Cuba, what could be done? And again I quote:

"The point that I wish to make is this: McKinley gave Rowan a letter to be delivered to Garcia; Rowan took the letter and did not ask 'where is he at?' "

But I wish to mention one more thought of our essayist and I quote:

"You, reader, put this matter to a test. You are sitting now in your office; six clerks are within call. Summon anyone and make this request: 'Please look in the encyclopedia and make a brief memorandum for me concerning the life of Correggio.'

"Will the clerk quietly say, 'Yes, sir,' and go do the task?

"On your life, he will not. He will look at you out of a fishy eye and ask one or more of the following questions:

" 'Who was he?'

" 'Which encyclopedia?'

" 'Where is the encyclopedia?'

" 'Was I hired for that?'

" 'Don't you mean Bismarck?'

" 'What's the matter with Charlie doing it?'

" 'Is he dead?'

" 'Is there any hurry?'

" 'Shan't I bring you the book and let you look it up yourself?'

" 'What do you want to know for?'

"And I will lay you ten to one that after you have answered the questions, and explained how to find the information, and why you want it, the clerk will go off and get one of the other clerks to help him try to find Garcia—and then come back and tell you there is no such man."

Salesmen's Message

In the life and work of an industrial or commercial salesman to "Carry the Message to Garcia" implies to me that the salesman—once he has been assigned a task (and likely as not this may be self-assigned)—has cleared all the intervening hurdles and has achieved the desired objective which usually, to put it bluntly, results in a SALE. And the important implication is that he has developed and followed his own strategy in producing that sale without running back to his boss or to an associate for advice and direction each time he came to a fork in his pathway of progress. And so I have used this setting because it expresses my ideas and gives me a concise and, I hope, a thought-provoking answer to the title, "What I Expect from Industrial and Commercial Salesmen." My answer of course is, "I expect them to carry the message to Garcia."

With that borrowed phrase this message might be concluded here and now. But to do so would risk the possible misunderstanding that the commercial or industrial salesman should literally isolate himself as "the fellow by the name of Rowan" did in our story. True, that was the best approach for him in attacking his particular task.

No Lone Scout

The utility salesman, on the contrary, "carries the message" by cooperation with others rather than by isolating himself. He completes his task by working as one of a team rather than as a lone scout.

Condensed from an address before the Missouri Valley Electric Association, Kansas City, Mo., Feb. 6, 1959.

I expect salesmen to be what their job titles imply—*Salesmen.* Many of these men are graduate engineers, and all have technical aptitude or training. But they are not just engineers who write orders. Their task is to sell. Although many of them need an engineering background to perform their work, they must never let the means obscure the end.

The kind of things they must sell are numerous. Whether a man is an industrial sales engineer responsible to and for the largest industrial consumers, or whether he is a commercial representative calling on the corner drug store, here are some of the things I expect him to sell and keep selling:

- All the new business that will be economically feasible for the customer to use.
- Retention of existing business in the face of increased competition.
- Additional services which are mutually advantageous for the company to furnish and the customer to use.
- Replacement of competitive services.
- I expect him to sell the idea of more complete electrical service to architects, engineers, and designers and builders of new industrial plants and commercial buildings.
- He must sell the idea that his company, and he as the representative of that company, are the natural ones to look to in all matters involving the company's service and the use of that service. He must sell his company and himself.

Here are some of the many things I expect industrial and commercial salesmen to *know*:

- They must know their company, the services it has to offer, and its problems.
- They must know its rates better than the best expert among the customers.
- They must know company policies, procedures, organization, and how to activate that organization to perform as needed to serve customers.
- I expect them to know their customers' business operations and problems. They must know about developments of proposed new plants and facilities and expansion of existing ones. They should know such intimate details as financial problems facing their customers. They need this, for example, in order to give accurate and timely advice on how a customer can use purchased power to save a large outlay of capital for a new engine (which capital the salesman happens to know will be hard to raise or will be needed for other purposes).

Industrial and commercial salesmen should exemplify, or *be*, certain things:

- I expect them to be truthful and honest in all their relations and dealings with customers as well as in their contacts with those in their own utility family.
- I expect them to be alert to the changes which always are taking place. The customers' needs are changing. The services the utility can furnish are undergoing changes—even if slow. The means by which customers can effectively utilize those services never are static. And so, the successful utility salesman must keep reviewing and revising his technique to keep up with the times.

Times Have Changed

The kilowatt-hour and what it can do for the customer is not the same article it was 30 or 55 years ago, any more than a 1959 motor car is the same as its 1927 ancestor. And the things it took to sell the cars which rolled on those first all-surface roads certainly wouldn't be effective in selling those on today's turnpikes.

Back in the days when a gravel road was a luxury and when a blindfolded boy could identify the make of almost any automobile by its distinctive rattle or engine noise, I witnessed a feat of salesmanship I haven't forgotten. I, too, was supposed to be a salesman then—working after school and on Saturdays in a small town clothing store.

A New Prospect

My boss, C. A., was the prosperous owner and my ideal of a good salesman. Across the town square was the motor car agency of C. B. One day C. B. came into C. A.'s clothing store to try to sell his particular make of car (which C. A. had never before owned).

After extolling the beautiful finish, the balloon tires, and the four-wheel brakes of the newest Buick, he asked C. A. if he had any questions.

"Yes," said C. A., "I've noticed your Buicks are nice and quiet when new, but after they get some age and miles on them those overhead valves you boast so much about develop a very annoying clickety clickety clickety click noise. Now what I want to know is, will this new model Buick develop that same clickety clicking noise after a few thousand miles?"

And C. B.'s answer, which made the sale, was honest and forthright, and he recoiled from C. A.'s jibe when he said: "Yes, it probably will! But say, have you noticed how long those old Buicks keep right on running and making that same faithful clickety click noise year after year?"

The sale C. B. made that day was a profitable one because C. A. "changed his brand" and drove Buicks for a long time after that.

If C. B. were alive and selling Buicks today he would have to develop new techniques and sales approaches—just as the power salesman has to keep up to date. But his basic principles of salesmanship, his honesty, and his ability to sell himself still would serve him and his customers just as effectively as they did then. Yes, I expect the industrial and commercial salesman to be alert, to keep up to date, to be truthful and honest in every transaction.

Another thing I expect the industrial or commercial salesman to be is *the company* in the minds of his customers. Most of his contacts are personal ones, and the customers expect to see the reflection of the company in the personality of the man who calls on them. I don't mean that a salesman should try to leave the impression that he "owns the outfit." He knows his businessman customer is aware that thousands of shareholders own the utility and that it is managed by a president and his staff of officials.

The customer may play bridge or golf with the utility president, but in dealing for more power for his new mill the power salesman is *the company* to him. In playing the role of *the company,* I like to envision it as meaning the salesman accepts the responsibility for serving the customer in every way possible, but does not try to accept all the credit for the company teamwork which provides that good service.

In the use of first person pronouns I expect the salesman to use the words "we" and "our company" rather than "I" and "my company." I don't expect a good salesman to write a letter saying this: "I will have one

of *my* engineers call on you to study your problem," or "I'll ask *my* rate department or *my* construction department to give your case special consideration."

I do expect him to say something like this instead: "I will arrange for one of *our* construction crews to move that pole out of your driveway promptly."

Authority and Confidence

In written or oral proposals to a customer I expect the power salesman to represent the company and speak with authority and confidence. A part of a power salesman's letter might read like this:

> "The extra cost for the duplicate facilities you desire will be xxx dollars and we shall appreciate your authorizing us to proceed by your approval of the enclosed agreement."

I would prefer (and expect) something like the above, rather than:

> "Our engineering department advises me it will cost you xxx dollars to construct a second line to your plant, and our accounting department insists on written approval or payment in advance, and I will ask our legal department to prepare a contract, after which I will see if I can get our construction department to do the work."

In the first instance the salesman is speaking as the company and is "carrying the message" (from the customer) all the way to Garcia. In the second example he seems to be trying to tell the customer that *he* is on the customer's side, but all the other departments are working against him. Instead of "carrying the letter to Garcia" he is referring the customer to a dozen Garcias all over the company.

Service Counts

The customer knows the salesman has many departments to consult and coordinate in producing his company's end product—service. The customer isn't interested in all the steps which are necessary in the utility's "red tape machine" to complete the job. It is the industrial or commercial salesman's job to simplify the problem for the customer by creating the impression the company operates as an informed and coordinated unit, rather than a series of disconnected and even competing departments.

I do not mean the salesman should pretend he knows every detail about his company. He should be quick to acknowledge he does not. He will arrange to bring in specialists and experts from his company when they are needed. By performing such extra services he will not destroy his own prestige, but he will build up himself and his company in the esteem of the customer.

In expecting the salesman to "carry the message to Garcia" I am thinking not only of the services he performs for his customers and in cooperation with various other company departments, but I am thinking also of the things he can do to assist his own boss or department head.

In "carrying the message" or completing an action, the ideal result is the presentation to his boss of a solution in the form of a recommendation suitable for approval or disapproval. As a problem becomes more difficult and complex there is increased tendency to present it to the boss in piecemeal fashion. The salesman should remember that his boss has many others reporting to him. If all information and recommendations from all of these men reach him thusly, his problems may multiply like those of the boy who mixed up all the pieces of several jig-saw puzzles just to make the solution more interesting.

It may seem easy at each decision point to ask the boss what to do next. And it may appear easy for him to answer. Some good bosses, who run their offices with wide-open doors, fall into the habit of answering many such questions without realizing they are inviting inefficiency both for themselves and their men. In all offices there abound plenty of major decisions to be made and plenty of counseling and teaching to do, to occupy all of the available time of the boss, without expecting him to help each salesman with each piece of the salesman's own little jig-saw puzzle. So I would expect each commercial and industrial salesman to form the habit of organizing his thoughts and his work so he can recommend to his boss what he thinks should be done rather than ask the boss what ought to be done.

If my remarks sound like a "before and after" or a "how to do, how not to do" lecture; if there is any impression that I am proposing great reforms for all commercial and industrial salesmen, let me tell you that nothing is farther from the truth.

I don't pretend to be smart enough or experienced enough to suggest that I know better than a seasoned industrial or commercial salesman how he should best conduct himself to achieve the success which already is his. I have many friends in this profession whose experience, wisdom, and judgment in their work excel any such qualities to which I can lay claim.

The Best of Each

So, I have tried to select the best qualities which distinguish each of these men, and hold up these attributes for all to consider as what I expect of salesmen. There is much that bosses of those to whom I have referred can do to lighten the burden of that salesman whom I expect to "carry the message to Garcia."

I have said that part of a utility salesman's job is to secure cooperation and teamwork within his own company, and to do this he must really know his company and *be* the company to the customer. The officers and supervisors have a duty to see that he has an opportunity to know the inner workings of the various departments of the companies.

Theirs is the task of creating within their corporation the desire for cooperative effort on the part of every department head and supervisor.

Theirs is the task of instilling in the minds of its people that *service really is our business.*

Theirs is the task of creating within the "shop" the proper climate in which the seeds of cooperation and friendliness can germinate and grow to maturity.

Theirs is the task because that kind of corporate climate can successfully spread only in one direction —from the top down.

Proper Attitude Necessary

If those who are the immediate bosses of commercial salesmen want their men to bring completed plans all ready for approval, then they must encourage that by their own attitude toward these salesmen. If they want them to "carry the message" and recommend what should be done rather than ask what *they* should do, then the bosses must create the proper climate in which that idea can

flourish. The salesmen can't do their part of this job if the bosses are constantly breathing down their necks or looking over their shoulders and checkmating them on every approach before they have had a chance to think it through themselves.

Yes, it is true that when President McKinley called on "the fellow by the name of Rowan" to go and find Garcia he didn't take him by the hand and lead him into the Cuban wilderness. But neither did the President set any bear traps in his path.

Proper Conditions Necessary

And so, in setting up my goals of expectations for performance of these important men in our companies, let me qualify my remarks and say I expect these things from industrial salesmen, under proper conditions. I expect them to perform if we give them the climate of friendliness, of belonging, of freedom of action within defined limits; yes, if, and only if, we give them a climate within their own companies that assures them *we* really want to help them to make *service our business.*

Purchasing and Stores Committee Meets May 4-6

THE EEI Purchasing and Stores Committee will hold its 12th Annual Meeting at the Soreno Hotel, St. Petersburg, Fla., May 4-6, it has been announced by G. H. Cole, Chairman of the Purchasing and Stores Committee.

A program of special interest and value to purchasing and stores personnel of electric utility companies will be presented at four sessions, according to Mr. Cole, who is Manager of Purchasing for Alabama Power Co. The theme of the conference is "Better Materials Management Means Improved Utility Performance."

At the first session on Monday morning, May 4, following the opening remarks by Chairman Cole, W. J. Clapp, President, Florida Power Corp., will welcome the group.

R. B. Gear, Commonwealth Edison Co. and EEI Vice-Chairman, Purchasing, will preside at the morning session which will present a discussion by representatives of three companies on value analysis and how it pertains to utility purchases. Next, G. A. Spencer, The Detroit Edison Co., will present as his subject "Storeroom Returns—Salvage—Disposal," with some new economic thoughts on an old problem.

At the luncheon on Monday, May 4, W. C. MacInnes, President, Tampa Electric Co., will address the group. The Monday afternoon session will be presided over by H. T. Simpson, Boston Edison Co., EEI Vice-Chairman, Stores. Reports of the Standard Packaging Subcommittee and a Subcommittee on Material Standards Liaison will be heard. An address on material control management will be presented by W. N. McClelland, Consumers Power Co., followed by a panel discussion. Registrants attending the session will organize into groups with discussion leaders.

At the Tuesday, May 5, morning session, R. F. Connelly, Tampa Electric Co., will speak on "Follow-Up—How Is It Done?" which will cover the question of keeping vendors alert. "Buying—Stores Cooperation" and how it improves the overall efficiency of operation is the subject of C. L. McCarney, The Cleveland Electric Illuminating Co. M. A. Edwards, Duke Power Co., will present the topic, "Evaluating Material Handling Costs" in which a hard look points the way to cost reduction.

At the Tuesday, May 5, luncheon session, Fred C. Foy, Chairman and President, Koppers Co., Inc., will address the group.

The Tuesday afternoon session will feature the Purchasing and Stores Question Panel in which the panel members and others will answer problem questions presented and asked by those attending on purchasing or stores operational matters. The question cards have been mailed out to members in advance of the meeting. The subjects to be discussed will be based on such questions. These question cards are to be filled out and mailed to R. B. Gear, Commonwealth Edison Co., Chicago, Ill., not later than April 15. A brief business meeting will conclude the Tuesday afternoon session.

A program of visits to various properties of Florida Power Corp. and Tampa Electric Co. has been scheduled for Wednesday morning, May 6, culminating with luncheon at the Columbia Restaurant in Tampa. The reception and dinner of the annual meeting is planned for Monday evening in the Soreno Hotel and activities for the ladies accompanying members to the meeting are planned for Monday and Tuesday, May 4 and 5.

New Consumer Booklet Is Offered by BLBS

"Eyes, Our Windows to the World," a completely new edition of an earlier Better Light Better Sight Bureau booklet on lighting and the science of seeing, has just been published, BLBS Bureau has announced.

Brought Up to Date

The attractive new 32-page, two-color booklet retains the title and many of the basic fundamentals of light and sight found in the popular earlier editions but has been completely revised and brought up to date, with entirely new artwork and format. The publication was an undertaking of the Bureau's Lighting Information Committee, under the chairmanship of W. A. Stannard, Consumers Power Co.

Prices Listed

The new booklet, which carries a BLBS Bureau form number B-564, is priced at 6 cents in quantities of over 5,000; quantities of 1,000-5,000 are priced at 8 cents, while quantities of under 1,000 are priced at 10 cents each, from the BLBS Bureau, 750 Third Ave., New York 17, N. Y.

The Research Program for EEI

By Howard P. Seelye
Consultant, Research Projects Committee, EEI

THE type, character and scope of the research work being done by EEI and its member companies were described in some detail in the series of articles, "Research by Electric Utilities," which appeared in the October, November and December, 1958, issues of the EEI BULLETIN. They gave the results of surveys made by the Research Projects Committee during the past three years. In the last of these articles, "Future Research," the possible advantages to be gained by certain coordination of future research were indicated rather briefly. This article takes up those possibilities somewhat more specifically and tells what is being done by the various engineering committees and other groups in EEI, in collaboration with the Research Projects Committee, to investigate still further what should and could be done that will be of true advantage to the industry.

The survey indicated the following conditions which are of importance and which could be improved to advantage:

1. Most of the research projects are what might be called "application research." They are directed toward the correction of faults or weaknesses in present methods or equipment, or possible improvements in present practices for greater economy or better service. A notable exception to this is the large amount of effort being put into the development of power generation from atomic energy, which is certainly a far-sighted development. Aside from this, however, comparatively little is devoted to the investigation of new ideas for the more distant future application, and practically none to basic research not directed toward specific, foreseeable use. Although it is not to be expected that the electric utility industry will engage to a large extent in "pure research," it is believed that certain long-range projects are warranted in order to anticipate system requirements beyond the area of immediate planning.

2. There are many subjects on which two or more companies are working and, in one case, as many as 20 indicated some research activity. There has been, however, no definite provision for coordination between these companies, for the exchange of information, for avoidance of duplication of work, or for the extension of projects to more complete coverage of the subjects beyond the individual local interest. The EEI committees have done a great deal in collecting and presenting material on certain topics of general industry importance. They also offer opportunity for personal contacts between men from different companies. In some cases, they have sponsored research projects by EEI as a whole. It appears, however, that there are good opportunities for efficiency and economy by putting coordination on a more definitely organized basis.

3. The research contributions to the industry are not well balanced among the companies. Presumably the benefits of research are realized by all, somewhat in proportion to their size and the nature of their systems. On the other hand, except for the projects supported by EEI as a whole, about half of the members reported no individual research, another quarter only a very small amount, leaving the remaining quarter responsible for the greater part of it. The latter group contains, of course, most of the larger companies, but among these there is a great variation in activity. This disproportion is apparently not due to unwillingness or lack of interest, but rather to the difficulties of undertaking research in the smaller organizations, and variations in facilities and personnel in the larger ones.

Research Subjects

When summary reports on the research projects listed in the survey were requested from their sponsoring companies, they were asked to indicate if they believed that further coordinated effort on any of them was warranted. For more than 300 of these projects, such extension was recommended. In some of these, mere exchange of information or perhaps collection and publication of all available data would be indicated. In others, local studies on limited parts of a subject should be extended to additional aspects of it for more general application. In still others, investigation beyond the practical scope of the one company's facilities is needed.

The suggestion of these 300 subjects is an indication of the opportunity which exists for greater coordinated effort in that research work which is already under way. It is not to be expected that all of these projects, or perhaps even a large part of them, will be found suitable for any considerable amount of extension by EEI, but it does seem probable that a fair number of them should be so treated. At least they should all be reviewed with that in mind. A few examples of subjects so suggested for further studies are as follows:

- Economic disposal of fly ash.
- Coal sampling and analysis.
- Statistical and probability methods of measuring reliability of generation.
- Economical substitute for wood pole structures.
- Coal transportation by pipe line.
- Dispersion of stack gases.
- Extra-high-voltage lines.

In order to determine desirable new subjects on which research has not yet been started, but which could be recommended, a canvass has been made of the EEI member companies through their correspondents on the survey. A substantial number of suggestions for such projects have been received. Some of these are:

- A preliminary study of all of the possibilities of direct conversion of heat into electrical energy. This is important, not only from the standpoint of economy of generation to improve the present efficiency of about 40 percent, but also to

avoid the concentration of generating plants along watercourses to obtain the necessary condensing water. As system loads become larger and larger, the continual growth in the size of power plants needed creates increasing difficulties in stack gas dispersion, heat dissipation, and transmission outlets. There will undoubtedly be eventual limits to the feasible concentration of generation and to levels of transmission voltage, which could be avoided by greater distribution of generating sources throughout the system.

- Study of possible characteristics and problems of transmission at 1,000,000 volts or higher. Voltages above 400 kv are already in use. If concentrations of generation continue to increase indefinitely, the need for 1000 kv or higher is entirely conceivable unless other solutions can be found.
- Determination of the availability and quality of fossil fuel resources. Present data are deemed insufficient for definite future system planning.
- Development of improved storage batteries for use in electric automobiles and as a heat-storage device for off-peak energy.
- Further studies on the effects and nature of lightning.
- Coordination of temperature, sky cover, and wind velocity data in connection with short-time load forecasting.
- Study of the relationship between turbine starting procedures and resulting temperature stresses.
- Development of reliable and economical underground distribution for general use in residential areas.
- Continuing study of radio and TV interference from distribution lines.
- Study of the possibilities of billing customers on demand only.

From the response received from the two sources just described, it can be conclusively stated that there is a great deal of research work beyond that now being done by the electric utilities which these companies think would be worthwhile undertaking, in some cooperative fashion. The problem, then, is that of sorting out what is in greatest need of attention, and of finding practical means for doing it.

Information Exchange

As a first step toward promoting coordination between companies on subjects of mutual interest, the Research Projects Committee has undertaken to furnish to any member company, on request of its designated research correspondent, copies of summary reports on any of the research projects listed in its survey. No attempt has been made to obtain detailed information on these projects, but the report is sufficient to indicate the character and scope, how the project is being handled, a brief statement of results, and the name of the sponsoring company. This allows the inquirer to make direct contact with the sponsor for further information and discussion if he wishes to do so. During the past year, reports on about 80 percent of the listed subjects have been requested, and more than 2600 copies of these reports have been distributed.

A new supplemental survey in 1958 has produced 267 additional research projects, started since the previous survey, for which reports will also be made available to member companies.

Research Organization

In the past, research projects which have been sponsored by EEI as a whole have been planned and directed by the EEI standing committees, such as the Prime Movers Committee for example. Any proposal to undertake research on some subjects within its general scope is first studied by the committee and, if found suitable and of sufficient importance, a recommendation to that effect is made to the Research Projects Committee, together with a plan for the work and a cost estimate. If the Research Projects Committee concurs with the recommendation, it is forwarded to the Board of Directors for approval and provision of funds. Thereafter, the initiating committee, through a task force, directs the prosecution of the project, reporting periodically to the Research Projects Committee on progress and expenditures. On conclusion of the work, the initiating committee issues and distributes the necessary reports on it.

In considering any expansion of research work, it is essential that these EEI committees continue to take a key part, since they have in their membership the greatest available concentration of knowledge and experience in their fields. A cooperative program has, therefore, been set up between the Research Projects Committee and the five engineering committees — Prime Movers, Transmission and Distribution, Electrical System and Equipment, Hydraulic Power, and Meter and Service—to determine what additional research should be undertaken and to conduct whatever may be agreed upon and approved.

Each of these committees has appointed a representative to work with the Research Projects Committee. The plan to be followed is in accordance with the previous pattern as described above.

Each of the representatives will make suitable arrangements within his committee to consider any suggestions which may be made for cooperative research on subjects within the scope of the committee.

All of the proposals which have resulted from the research survey and the canvass of correspondents will thus be studied in the appropriate committee. Those found unsuitable will be eliminated; those thought worthy of further attention will be assigned to special task forces for study.

It is anticipated that any action taken or recommended on accepted subjects may be either in the form of mere collections of data and information, or in organization of group cooperative projects between a limited number of companies, or in minor research projects, or in major research projects. In any case, there is assurance that a suggested project will have careful consideration by those best suited to do so and will be favored, on any of these plans, only if it is well justified. The extent of future EEI research will depend on the real needs which may develop from this program.

The Research Projects Committee will function as overall coordinator for the program. Similar arrangements with other, non-engi-

neering EEI committees appropriate to the research possibilities in their fields are being made.

Future Possibilities

It will be seen that the cooperative program, as outlined, is essentially a continuation of the method followed in the past, except that it provides for:

- Greater emphasis on the research activities of the committees.
- More complete and systematic coverage of needed research.
- Promotion of group cooperation.
- A central point for furnishing information and for assuring consideration of suggestions for research from any source.

If EEI research does build up, it will do so gradually as needed projects are presented. No large, initial, general appropriations are contemplated and no considerable central staff. Each project will stand on its own merits.

It is expected that, in any case, individual companies will continue their own research as they see fit. They might eventually concentrate on those projects which are only of local interest and application, and possibly on preliminary investigations in major subjects of wide interest. In these latter cases, the company might need certain answers quickly for its own use, or it might wish to develop the possibilities of the project and then pass it along to EEI for further cooperative action.

One difficulty in the past has been that, without organized coordination, it has usually taken considerable time between a suggestion for cooperative research and its eventual prosecution. An objective of the program will be to shorten this time and get prompt action on proposals from member companies. If this is done, it is believed, in general, those projects which are of importance to the industry as a whole could be handled by the EEI program more efficiently than by individual companies acting independently. Appreciable savings in time and money should result.

The plan has been made and the organization with the committees which has been described has been initiated. The goal will be to disclose what research is really needed, just what part of EEI as an organization should be in it, and to provide means for carrying on those projects which can be justified by their value to the industry, not only for the immediate future but also for the more distant but foreseeable conditions. The governing purpose is, of course, to further the interests of EEI members, with the greatest possible effectiveness and economy.

EEI Appoints M. O. Whithed Rural Service Manager

M. O. WHITHED has been appointed Rural Service Manager of the Edison Electric Institute, it has been announced by Edwin Vennard, EEI Vice President and Managing Director.

M. O. WHITHED

Mr. Whithed was formerly Rural Service Supervisor for Atlantic City Electric Co. and comes to EEI after nearly 24 years of service with Atlantic City Electric. He had been a member of its Rural Department since 1937 and was appointed rural service supervisor in 1951.

While serving with Atlantic City Electric, Mr. Whithed also was engaged in EEI activities. He is a past chairman of the EEI Farm Utilization Committee and in 1957-58 served as chairman of the EEI Farm Group.

Mr. Whithed was graduated from Powers Institute, Bernardston, Mass., in 1929, and from Bliss Electrical School, Washington, D. C., in 1931. He is a member of the American Society of Agricultural Engineers, the Farm Electrification Council of New Jersey, and the New Jersey Agricultural Society.

First Youth Atom Conference Planned

(*Continued from page* 68)

National Laboratory; Charles E. Robbins, Executive Manager of the Atomic Industrial Forum, who will tell the young scientists about industrial uses of the atom; Dr. Cyril Comar, Director of the Laboratory of Radiation Biology at Cornell University, who will describe the use of the atom in agriculture, and Dr. John Laughlin, Chief of the Division of Physics at Sloan-Kettering Institute for Cancer Research, who will speak on the uses of the atom in medicine.

Forecasts of the atom and the world of tomorrow will be presented by Vice President Francis K. McCune of the General Electric Co. and Vice President Charles H. Weaver of Westinghouse Electric Corp., who are in charge of atomic activities at their respective companies.

The students and teachers attending the conference will tour the Atomic Energy Commission's new 1959 version of its major "Atoms for Peace" exhibit, which will visit Atlantic City during the week of the conference as the first stop in a nation-wide tour. In addition, the Atomic Energy Commission and more than 25 other organizations will have exhibits at the conference site.

Dr. Ben D. Wood, Director of the Bureau of Collegiate Educational Research at Columbia University, is serving as educational consultant to the conference.

Students who will attend the conference will be chosen in cooperation with local school authorities in a variety of ways, ranging from selection by school principals to essay contests and special examinations. They will be selected for their excellence and interest in science, particularly physics.

George Cites Need for Market Research in the Electric Utility Industry

THERE is an urgent need for market research in the electric utility industry if the trend of doubling sales every 10 years within the industry is to continue, E. O. George, Chairman of the EEI Commercial Division Executive Committee, asserted at the Fifth Annual Public Utilities Seminar in Detroit, Feb. 19.

Predicting that by 1968, total sales should reach more than a trillion kilowatt-hours per year, with residential consumption expected to average between 6,000 and 8,000 kwhr, Mr. George warned that new ways must be found to develop markets to their fullest and to stimulate growth beyond so-called "normal trends."

"Electric utilities have made extensive use of technical research to build and improve facilities fast enough to keep pace with rapidly growing demands for energy," Mr. George said. "However, market research has not been so effectively used in sales programming." He indicated two probable reasons for this: first, load growth has been so dynamic as to minimize the need for intensive evaluation of markets, and second, market research is even yet a relatively new technique, particularly in the utility field.

The need for market research is accented by signs that the industry's virtually automatic growth is levelling off, Mr. George pointed out. "In spite of last year's increase in residential sales, the 6.6 percent gain was the lowest since World War II and is indicative of a tendency apparent since 1951," he said. "Obviously a continuation of the current trend would not result in the 10-year growth rate we expect. Thus we have a new dimension in electric marketing before us —a dimension where *sell* will be the password, where competition will be fierce and where imaginative sales programming is a must."

The electric utility industry has recognized this need with the establishment of an unprecedented, long-range National Electric Living Program, to sell more appliances, wiring and lighting in the homes of America, Mr. George explained. "It will be aggressive and it will be competitive," he said, "but while the national program will provide leadership, advertising and coordination, its success will depend on strong local action tying in with national themes but tailored to the individual needs of each local utility."

Four Steps Suggested

He suggested four steps which individual companies might follow to accomplish their selling objectives:

- Setting sales and revenue objectives by realistically forecasting that area of potential sales between so-called normal growth and accelerated growth—i.e., not what income would be, but what it should be if markets were sufficiently sold.
- Developing sales programs which will attain the required revenue, which means directing sales efforts to promotable areas and minimizing money and effort expended on non-promotable markets.
- Providing adequate sales budgets, not merely to support normal growth patterns but to finance the sales programs which have been designed to meet revenue objectives.
- Realistically measuring sales results by how well revenue objectives have been met.

Through questionnaires, Mr. George recently examined the progress of market research in the electric utility industry and found a growing recognition for its value.

Must Be Strengthened

Maintaining that market research can contribute much to electric marketing, he emphasized that it must be strengthened by continued progress in the organization of full-time market research groups, qualified through education and utility experience; by maintaining a high quality of study and presentation of results to management; and through management's recognition for the role of research in market planning. The three basic responsibilities for market research personnel are research to define the market, research to develop its potential and research to evaluate results, according to Mr. George.

With markets defined and classified according to economic factors, use characteristics and growth potential, the next requirement is market development research, Mr. George said. This he defined as determining buying motives and appeals, measuring of customer attitudes toward electricity and its value, and the evaluation of merchandising policy and techniques.

Mr. George stated that the need for better evaluation of sales methods and results is probably the most important area challenging market research personnel. He suggested that constant attention be given to the following factors:

- Continuing statistical analysis of average kwhr use—its growth rate and its components, system and class load factors, appliance saturations supplemented by current sales data from dealer and distribution sources, and ratio of promotional expenditures to increased revenue.
- Evaluation of advertising effectiveness in terms of media employed, competitive methods and practices, relative impact on buying motives and appeals, and costs in relation to sales.
- Keeping up to date with changing patterns in appliance use and newly marketed appliance products to forecast revenue increases resulting from sales programming.
- Continual review of sales organizations to be sure they are geared to the marketing job ahead, that manpower is properly utilized, and that any function not adding to revenue growth is carefully reviewed and perhaps eliminated.

Methods work is difficult, Mr. Wilson says, or more would be done. He sees no single, simple answer to the problem of how to obtain methods and practices improvements, of how to keep abreast of and contribute to the industry. But he believes an advisory committee on methods and practices can be an effective tool of management at a modicum of expense.

Management and Methods

By Allen B. Wilson

Assistant Treasurer, Georgia Power Co.

IT has been said that man is the product of his convictions. He does what he is convinced is right, and he doesn't do, ordinarily, that which he is convinced is wrong. The tragedy is that so often a man is convinced he is right, when he is dead wrong.

A man's convictions are, or at least should be, of vital concern to the management of the company by which he is employed. Obviously a stalwart being with a wholesome concept of life based upon a foundation of strong moral convictions is an asset to any organization. He doesn't create problems for you—instead, he is generally concerned with solving problems for you.

Isn't it sometimes strange how a person happens to acquire a conviction? For example, years ago a definition of golf was read which obviously was intended to be ludicrous or absurd but which, to the contrary, embodied a profound principle—at least to me. The definition was that golf is a game of sport in which a human being with a club standing on a sphere approximately 8,000 miles in diameter strikes another sphere approximately 1¼ inches in diameter, attempting to sink the latter into a cup four inches in diameter in the fewest number of strokes. The diametrical dimensions of neither the earth, nor the golf ball, nor the cup have been verified. They are unimportant for the moment.

The important point to me in this illustration is that the person who rendered that definition of golf did some real objective thinking. He detached himself not only from the golf course, where the game is played, but from the earth, the only planet I know of upon which the game is played, and he projected himself into outer space from where he viewed the problem—and golf is a problem to most of us—and from that mental vantage point he saw a person standing on a larger sphere with a club attempting to strike a smaller sphere.

Need for Objective Thinking

Call it objective thinking, or detached thinking, or projected thinking, or whatever you will, but regardless of terminology, I am convinced there is a great need in our industry today for the type of thinking illustrated by this simple analogy. You need to detach yourself from the forest and view the trees. Our managements have had to do that type of thinking, particularly in this post-war era of phenomenal growth, in solving the problems thrust upon us—real objective thinking in terms of employees and investors, in terms of customers and the communities we serve, in terms of the state and the nation, and, in this ideological struggle with which we are confronted, even in terms of the world.

How can the methods, practices, and procedures employed in our industry in marketing our product be improved? This is more of a problem today than in the entire history of the industry, and following are some of the reasons:

1. Operating expenses are being reckoned with in terms of revenues realized based on rates established on what is now a decimated dollar. Simply stated, the dollar is not worth now what it was when rates for electric service were last adjusted in most instances. The slightest slump in revenues distorts statistical ratios considerably.
2. Considerable technological advances have been made in electronic data processing machines, but adapting that equipment to your system requirements in an economically feasible manner remains a problem. Mere modernity is not the answer.
3. Size, of itself, breeds its own complications. Utility operations of today are more complex and pose problems more defiant of solution.
4. There is a dearth of qualified personnel in the utility industry who are capable of advanced methods technology.

Further, to view the problem more objectively, consider a hypothetical utility that has at least doubled in size in recent years, if not tripled, or quadrupled, and see if this hasn't happened.

As this operating company has grown, the executives have become farther and farther removed from the details of operations. Theirs has become the uppermost strata of man-

agement, where legal, technical, and administrative decisions are made, and where company policies are formulated. Intimacy with details, or the system employed in their administration, is undesirable, even if attainable, because management should not becloud decisions with this knowledge.

Departments were long since organized in this company and a delicate equilibrium of authority and responsibility was delegated to the department heads to administer the details. However, as the departments have grown, the more sovereign the departments have tended to become. Hence, horizontal communication between departments has gradually diminished in inverse proportion to the size of the company.

Problems of Expansion

Since this company has become much larger, it has become increasingly difficult for the management to obtain interdepartmental cooperation and collaboration, even in the areas of mutual interest and concern. Therefore, commendable developments in methods, practices, and procedures, particularly when affecting more than one department, are not adopted, for various reasons.

Equal initiative does not exist at the same time among all the department heads of a company. Nor does it seem that a leader will step up and press for the adoption of a system that would be beneficial to a company. And, there is no simple route by which, ordinarily, suggested system reforms and refinements may be readily transported to the conference table of management.

A company, then, can fail to keep abreast of the current trends and developments in the industry.

Management does have a moral responsibility—to the company, to the industry, and to the nation—to further develop and refine the art of marketing its product, electricity, which is now as essential to most as food, clothing, and shelter. To market this product at the lowest possible cost commensurate with sound business principles has long been one of the industry's objectives.

About two years ago, the management of my company created an Advisory Committee under its direct supervision. This committee is charged with the responsibility of reviewing all present practices and procedures of the company and of recommending those changes and improvements deemed appropriate. Even though strictly advisory in nature and without authority, such a committee, to function properly, must have the official sanction and support of all the general officers of the company, including the president. Also, management should stress to department heads the importance of their cooperation.

Some of the operating details of the committee may prove of interest. First, membership is limited to a maximum of 15 to avoid unwieldiness. The members represent a cross-section of the company, with a maximum age of 45 or 50 and with a minimum length of service of at least five years as prerequisites of membership. Tenure is for three years, with a staggered rotation of five members each year to retain an experienced core at all times, and to afford the opportunity to as many as possible. Obviously, personnel with potential should be selected.

Upon the formation of such a committee, immediate results should be neither anticipated nor urged. The committee should proceed with caution and utmost discretion. Highly controversial questions should be avoided until the committee is rather widely accepted and firmly established.

Benefits to Management

However, various benefits should accrue to management if such an advisory committee is properly administered, as follows:

1. First and foremost, a fine camaraderie will develop between and among the committee members. As time goes on, and present and former members assume more responsible positions, these relationships should lead to greater interdepartmental cooperation and collaboration in the interest of the company.
2. A wealth of specialized knowledge concerning the subjects discussed will be imparted by various members with a tremendous broadening effect upon the group.
3. New ideas will be generated and other ideas evaluated that may be used to create new, or strengthen present, practices and procedures.
4. The committee will help establish the concept that change is normal and that methods and practices should be revised whenever improvements can be attained to meet changes in conditions.
5. Direct vertical communication between the committee and top management will prove invaluable. Projects involving several departments will be submitted for their approval which otherwise might be shelved for the lack of initiative by any one of the departments concerned.

Plans for a Clinic

Monthly meetings are held and numerous subjects have been discussed. Approximately six months ago approval was obtained from management to conduct a Methods and Procedures Clinic within the company. Tentative plans envision an 80-hour course, with approximately 25 enrollees, meeting weekly for a two-hour session on company time.

Since a tailor-made course was not available that would meet our requirements, it was necessary to employ an educator - consultant to develop the curriculum for this course to our specifications. Following is a list of the general subject areas to be covered:

The Relationship of Methods and Procedures to Company Objective, Policies, and Organization Structure; the Importance of the Human Element in Methods and Procedures Work; Some Results of Methods Studies; Suggested Approaches to Methods Improvements; Work Simplification — Its Basic Philosophy; Multi - Dimensional Thinking — a "Must" for Methods Improvement; Creative Thinking.

Also, Charts and Their Uses in Methods Improvement; Principles of Motion Economy; Principles of Physical Layout; Selecting the Job or Procedure to Be Improved; Recording and Analyzing the Job Details; Developing an Improved Method.

Also, Installing the New Method Standard Operating Procedures; Guided Applications of Method Improvement Techniques; Employment of Machines and Equipment to Improve Methods and Procedures; Forms Design; Report and Analysis of Individual Method Improvement Projects.

Perhaps any speculation concerning this methods course is premature, but radical results are not anticipated. Some tangible results are expected and there should be a return on the investment, which, per employee trained, will be less than $250. However, sufficient intangible results should be realized to justify the expenditure.

The interest manifested in the employee, by training him to excel at his present job and by equipping him to assume a more responsible position, should, of itself, reap some return. The knowledge imparted through group discussion of individual methods projects, which will be developed by each member of the course, should be highly beneficial and educational.

It is hoped that the methods clinic will be sufficiently successful to justify its continuance and that the course will be repeated many times. It is also hoped that from among those taking this training a few will emerge who evidence a superior native aptitude in this field, and that they will be provided advanced training and utilized more fully in this area in the future.

Methods Men Scarce

Among all the skills, professions, aptitudes, and talents represented by the employees of the utility industry, one of the more difficult jobs to fill with absolute satisfaction is that of the methods man, as attested by the fact that most are accidental discoveries. So, obviously, this methods clinic cannot produce skilled methods analysts. It is a mere gesture in that direction. But, at least, it is a start.

Our colleges don't produce methods personnel — industrial engineers for industry, yes, but not for the office. Some day, I am confident, it will be a recognized profession, with its own appropriate degree.

Methods work is difficult, or more would be done. The surface has barely been scratched. But what makes it even more difficult is the return expected of the methods man on his investment. Instead of a yield of 6 percent on money so invested, he is expected to return a minimum of 20 percent and preferably more than 30 percent, or to recoup his expenditures in a three- to five-year period.

There is no single, simple answer to the problem of how to obtain methods and practices improvements, of how to keep abreast of the industry—not to mention how to contribute to the industry. An advisory committee on methods and practices can be an effective tool of management at a modicum of expense. But it can be considered no more than a refinement in the art of management—nonetheless, a very desirable refinement, in my opinion.

Even though difficult, and with many attendant complications, methods work can be very rewarding. When you see human labor dignified; human productivity increased with less expenditures of effort; and economies realized—the vocation of methods can be very satisfying.

Thornborrow Named EEI Director of Economics and Statistics

JOHN THORNBORROW has been appointed to succeed Walter B. Gesell as Director of Economics and Statistics of the Edison Electric Institute, it has been announced by Edwin Vennard, EEI Vice President and Managing Director.

Mr. Gesell, who retired in 1957 as Vice President in Charge of Operations for the Oklahoma Gas and Electric Co., had accepted the EEI appointment on a short-term basis at that time.

Mr. Thornborrow joins EEI after nine years as manager of public utility investments of The Northwestern Mutual Life Insurance Co., Milwaukee, Wis. At the end of last year, the company's public utility portfolio totaled about $777 million. He went to Northwestern as assistant director of bond research in 1947.

With more than 20 years of experience in utility economics, statistics, rate matters and investments, Mr. Thornborrow has served with Central Illinois Public Service Co., Southwestern Gas & Electric Co. (now Southwestern Electric Power Co.), Middle West Service Co., The Cleveland Electric Illuminating Co., and Ebasco Services Inc. For several years, he was active with the EEI Rate Research Committee and the Load Research Committee of the Association of Edison Illuminating Companies.

His utility career began with Central Illinois Public Service, where he was employed during the summer while attending the University of Illinois. After being graduated *cum laude* in 1932 with a B.S. degree in public utility operation and management, he entered the University's graduate school on a public utility fellowship, receiving a master's degree in economics in 1933, and a Ph.D. in economics two years later. He is a member of the Beta Gamma Sigma honorary fraternity.

JOHN THORNBORROW

Cisler Heads 'Invest in America' Week

WALKER L. CISLER, President of The Detroit Edison Co., has been appointed National Chairman of Invest-in-America Week for 1959, which will be observed throughout the country April 26 through May 2.

Mr. Cisler's appointment was announced by Frederic A. Potts, Chairman of the Board of the permanent National Invest-in-America Committee, which has headquarters in Philadelphia.

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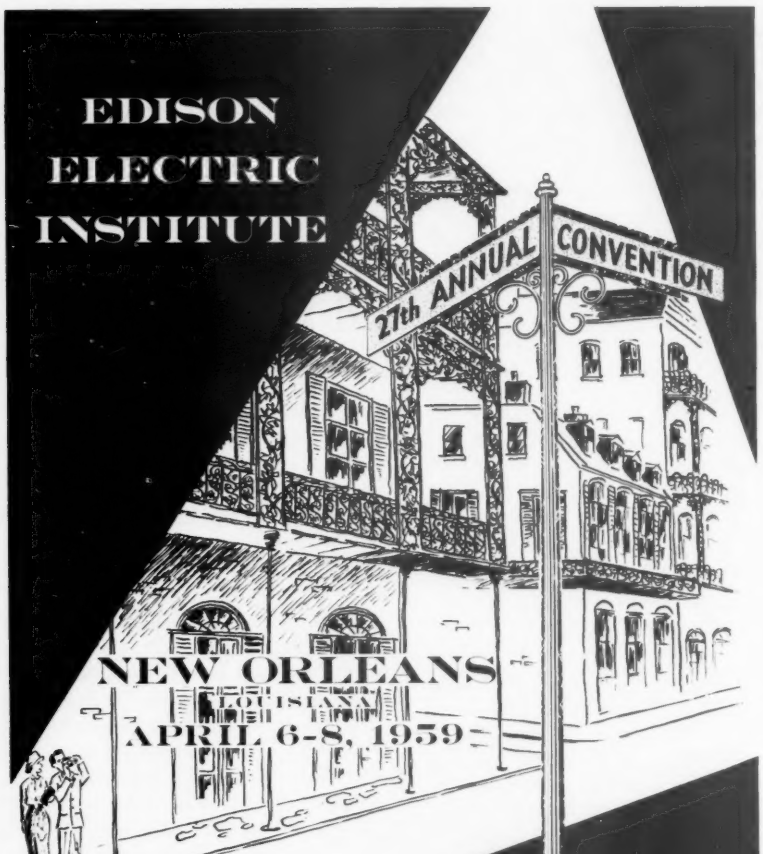

1959 Convention Issue of the EEI Bulletin

The April issue of the EEI BULLETIN will contain the complete texts of all speeches to be made at the EEI Convention in New Orleans, April 6-8. Authorities from within and outside the industry have been secured to discuss subjects important to the industry now and in the future. Because these speeches, an extremely valuable compilation of the best thinking on matters of importance to the industry, will be together under one cover, extra copies will be available for distribution to supervisors, key personnel and others interested in the electric industry and various aspects of its progress.

Send order for extra copies now to:

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Deductible Fire Insurance

By A. L. Chavannes

Assistant Treasurer and Manager of Insurance,
Southern California Edison Co.

ALTHOUGH many kinds of insurance, other than life and fire, have been readily available on a deductible basis for many years, the topic of deductible fire insurance has been discussed for several years but until recently very little has been done about it.

Like the Weather

Deductible fire insurance is not discussed as much as the weather, but it is in a somewhat similar situation in that there was an old saying that everybody talks about the weather but nobody does anything about it. In recent years, however, we have seen the rapid expansion of the business of the professional rainmakers, and also the development of efficient and effective air-conditioning equipment for homes and offices, including the reverse cycle heat pump. It is possible and highly probable that the next few years will similarly see a rapid expansion in the underwriting of fire insurance on a deductible basis. The fire insurance of our company was written on the basis of $100,000 deductible commencing Nov. 1, 1957.

For several years there have been strong advocates for deductible fire insurance, or as we sometimes express it, excess fire insurance. Among the advocates are insurance counselors and owners of large plants and business houses, especially where the aggregate property values are large in comparison with the maximum probable loss at any separate location or in a single occurrence.

The owner of highly dispersed insurable property probably is more interested in deductible fire insurance than the owner of more concentrated or contiguous properties, because he has a right to expect a greater saving in premium. Generally speaking, a concentration of $20,000,000 of insurable plant at one location will command a higher primary insurance premium than $20,000,000 of insurable plant scattered in 10 equal, separate and isolated locations. The insurance carrier would be subject to a potential loss of $20,000,000 in a single fire at the concentrated location, whereas the maximum loss at a single location of the dispersed property in this example would be $2,000,000.

Although there are 10 times as many locations at which a fire might start, the risk of the large potential single loss is not there. As a practical matter, the rating agencies do apply multiple location reduction factors with respect to full coverage primary insurance on the dispersed properties, but such factors, in my opinion, do not adequately reduce the premium in proportion to the reduction in the risk.

Suitable for Insurance

The electric utility business seems especially suitable to the deductible type of fire insurance. One reason, of course, is the wide dispersal of insurable property. Another reason is the substantial savings in cost of handling the large number of small claims for lightning or fire losses, the latter generally of an electrical origin, either by artificially generated electricity or by lightning. This does not include losses along distribution or transmission lines, as those properties are generally not insured, but fires in distribution and transmission substations, customers' substations, generating stations, warehouses, garages, and commercial offices. In my experience with fire insurance without a deductible, I have seen numerous reports of small insured fire losses, and have observed the expensive paper work involved in collecting the claims from the carrier.

Initially the amount of each insured fire loss is probably established through the use of a work order issued by the insured, which means considerable paper work in the cost accounting process. The details are then furnished to the broker and the adjuster, for the preparation of the claims to be made against the carriers.

Assuming that the primary fire coverage is of the blanket type, that is, not a separate policy for each separate location, there may be as many as 40 or more insurance companies on the line, each of which must pay its portion of each claim. That means more paper work. Yet there is still more paper work. When the 40 or more checks are received, it is probable that the insured owner of the damaged or destroyed property cannot deposit them in his bank account.

Because of the mortgage requirements of some utilities, the payments covering fire losses are payable jointly to the utility and to the trustee under the mortgage securing the outstanding bonds issued by the utility. In the event there is a co-trustee, the checks must be endorsed by the utility and both co-trustees. The administering co-trustee keeps the payments on deposit until the utility takes the steps necessary under the provisions of the trust indenture to withdraw such deposit, again involving more paper work.

If, through the purchase of deductible fire insurance, substantially all of this detailed paper work can be eliminated for the utility, the broker, the adjuster, the insurance companies and the trustee, by eliminating all claims which are less than a predetermined amount, which is the amount of the deductible, there will be a saving in cost to all concerned.

Insurance Company Savings

The savings to the insurance companies will be the amount by which paper work is reduced, the adjusters' fees, the payments for claims which are less than the specified deductible, and the reduced commission to the broker. (The broker's commission rate on a fire policy with a large deductible is said to be one-half the

Presented before the Insurance and Claims Committee of PCEA-PCGA, Berkeley, Calif., Nov. 20, 1958.

standard fire policy commission rate.)

The savings to the owner of the insured property will be the cost of the paper work involved in determining the precise amounts of the losses, in making the claims, and the reduced premium, from which must be subtracted the fire losses which are within the amount of his retention, that is, the amount of each loss which does not exceed the amount deductible.

Must Choose Logical Amount

Before a property owner orders a deductible type of fire insurance and after being assured that his trust indenture does not prohibit such form of coverage, he must determine what appears to be the most appropriate or logical amount of the deductible for his particular situation, after weighing all of the facts with respect to his loss experience, the quotations, if available, and various deductibles.

Certain insurance companies or groups of companies are now writing a considerable portion of their fire business on a deductible basis. One executive said that as of Dec. 31, 1957, his group was insuring over $14 billion of business on a deductible basis, equal to 24.7 per cent of its standard business. He further said that the most popular loss retentions are $5,000 and $10,000, but that many policies were written with deductibles of $1,000 or less, and some with retentions of $100,000 or more.

It seems to be generally conceded by business executives that it is uneconomic to insure against a loss which can readily be absorbed by the business without serious adverse effect on the earnings or financial structure of the business.

Size of Premiums

Insurance premiums must be large enough to include the insurance companies' administrative costs and profits, in addition to the payment of loss claims.

A property owner, by being fully self-insured, could save all of the insurance company profits and a substantial portion of the administrative costs, but he still would have to absorb all of his fire losses. He can, by purchasing a deductible form of fire policy, be partly self-insured and save some of the insurance company profits and administrative costs, as well as part of the premium. In so doing he would absorb all or a part of the losses, depending upon whether any loss exceeds the amount of the deductible. At least he would know, after establishing the amount of the deductible, the maximum amount he would have to absorb for each fire.

Management must then decide how great a loss can be absorbed without insurance. It is believed that no one will deny the necessity of carrying insurance against catastrophic losses.

Our company decided on $100,000 as the deductible amount after weighing all of the pertinent factors.

We first became seriously interested in deductible fire insurance in 1951. At that time, we, our broker, and an independent consultant whose services were retained on a fee basis, made an attempt to obtain coverage on a deductible basis. We had no firm offers, and those proposals that we did receive were only a gesture and did not even approach an attractive price zone. Based on our loss experience for 10 or more years, and assuming a similar future loss experience, our estimated costs for a deductible policy at the 1951 rates would have been considerably higher than the conventional full coverage form of insurance.

Analyze Future Losses

When an insured is considering the adoption of a deductible form of fire insurance, he will analyze his loss experience records to determine the extent of his probable future losses within the retention and not collectible from the insurer. When the loss experience records cover years of creeping inflation and higher costs, it is obvious that the historical losses of the past must be adjusted upward in forecasting probable future loss experience.

In the latter part of 1956 we started in earnest to negotiate for a deductible form of fire insurance to be effective Nov. 1, 1957, at the expiration of the five-year policies then in effect. Needless to say, we did not receive any firm quotations.

We worked in the open with two separate brokers and the job was not easy. We found that the majority of insurance companies at that time would not write fire insurance on a deductible basis. Apparently they were afraid that they would be setting a precedent and that they would be promoting the principle of self-insurance to the detriment of the insurance business. Their rating bureaus apparently lacked adequate statistics and could not suggest any suitable rates.

We found one firm, however, that had a scale of credits to be applied to standard rates to obtain rates for various deductibles from $5,000 up to practically any amount. From the use of that scale, we had a tentative proposal or suggestion but no firm offer.

One Company's Offer

One large company offered to write a portion of our coverage at a specified rate on the basis of $250,000 deductible, but would not take any portion on the basis of $100,000 deductible.

Using our loss experience record as our chief guide, together with the scale of credits already mentioned, we instructed our broker to go into the market with a firm offer at a rate which we specified for a five-year policy, and to invite subscriptions from all reputable domestic companies and Lloyd's of London.

A lead company was obtained and the coverage was slightly oversubscribed. A large part was placed in and through Lloyd's; part was placed with mutuals and reciprocals, and the remainder with American stock companies. The premium reflects a net rate credit equivalent to approximately 55 percent. It is payable one-fifth each year, and is subject to adjustment on anniversary dates to give effect to changes in the values of the insured property.

At the time of the negotiations, the insurable value of our plant was approximately a half billion dollars. We placed a flat $50,000,000 insurance in excess of $100,000 each loss. As there is no co-insurance provision, I believe we have what is technically called excess insurance, rather than deductible insurance, but for the purpose of this discussion we may consider the two terms to be synonymous.

Other Utilities Consulted

In connection with these negotiations, we conferred with other utilities and with the chairman of the Insurance Committee of the Edison Electric Institute, and learned that a few other electric utilities had purchased fire insurance on the basis of $50,000 or $100,000 deductible each loss.

Our negotiations for the fire insurance included renewal of $8,000,000

earthquake coverage in excess of $1,000,000 each loss, with no substantial change in the form of policy or of premium. Each carrier that took a portion of the fire coverage also took a portion of the earthquake coverage.

Just what is meant by the terms "excess insurance" and "deductible insurance?" Under a fire policy with a provision for co-insurance and with no provision in the policy for a specified deductible, the insured can deliberately under-insure, thereby paying a smaller premium at the regular rate and by his co-insurance deficiency will automatically be required to absorb a portion of each loss. For example, an owner of property having a total insurable value of $10,000,000, may have a policy with a 90 percent co-insurance clause. If he pays the premium on $9,000,000 of coverage, he will collect 100 percent of each loss up to the limit of the policy. If he pays the premium on $4,500,000 of coverage of the same property, he will save one-half of the full premium, but if he has a loss, he will collect from the insurance company only 50 percent of the loss. Similarly, if he pays premium on 70 percent of $9,000,000 and has a loss, he will collect from the insurance company 70 percent of the loss.

Co-Insurance Deficiency

If the property owner deliberately elects a co-insurance deficiency such as has just been described, he can, if he so desires, separately insure, in another company or in a surplus line, such deficiency either with or without a deductible provision.

Another method of reducing premiums with a regular fire policy which has an element simulating a deductible is to exclude from the coverage all physical property locations which have insurable values less than the amount of the retention desired by the insured.

It is the responsibility of the insured's executives or insurance manager to study the types of insurance coverage available and to determine what seems to be most suitable for his particular situation and needs.

There is some literature on the subject of deductible fire insurance. Studies have been made by a subcommittee on Excess Fire Insurance and reported to the Insurance Committee of the Edison Electric Institute. Papers on the subject have been presented at various meetings of insurance people over the country. Probably no two utilities will have identical problems or risks.

We have seen the development of solutions to some weather problems, and we are seeing some progress in the field of excess fire insurance. Perhaps we will see further progress in the near future.

W. A. Parish

W. A. PARISH, Chairman of the Board of The Houston Lighting & Power Co., died Jan. 23. He was 71.

Mr. Parish was a member of the EEI Advisory Committee at the time of his death and was a member of the EEI Board of Directors from 1954 to 1957.

W. A. PARISH

Born in Huntsville, Texas, Oct. 5, 1887, he was graduated from the University of Texas with a degree in law in 1910. His first association with Houston Lighting & Power was in 1914 through the law firm of Baker, Botts, Parker & Garwood, where Mr. Parish was employed upon graduation from college. He later practiced law with Murray B. Jones under the firm name of Jones & Parish. This firm was dissolved in 1921. He returned to Baker, Botts, Parker & Garwood in 1922, and was made a member of the firm on Jan. 1, 1923. In 1948 the firm name was changed to Baker, Botts, Andrews & Parish. He handled the corporate and legal work of Houston Lighting & Power for many years through this firm.

Mr. Parish's ability, both as an attorney and in the fields of business organization and finance, resulted in his association with a large number of the area's leading commercial enterprises.

He resigned his partnership in the law firm which bore his name upon acceptance of the presidency of Houston Lighting & Power in November, 1953. Shortly before that time, he was named to the board of Rice Institute.

In April, 1958, Mr. Parish was elected chairman of the board of the Houston Lighting & Power.

His professional associations included membership in the American Bar Association, State Bar of Texas and Houston Bar Association.

Atomic Energy Briefings Held in Three States

NORTHERN States Power Co., four other electric utilities and the University of Minnesota sponsored an atomic educational short course on the University campus, Feb. 9. It was designed for educators in engineering, physics, science and mathematics and for professional engineers as well as science and technical writers.

The session consisted of a technical discussion of the research, planning, design and construction of NSP's 66,000-kw, atomic-fueled generating plant to be built near Sioux Falls, S. D., beginning this summer.

Sponsors of Meeting

Electric companies who sponsored this particular meeting were Interstate Power Co., Mississippi Valley Public Service Co., Northern States Power Co., Northwestern Public Service Co., and Otter Tail Power Co.

Similar atomic briefing sessions were held at Madison, Wis., Feb. 17, and at Des Moines, Iowa, Feb. 23. College and high school science instructors, engineers, and science reporters from Minnesota, North and South Dakota, Iowa and Wisconsin were invited to these meetings.

Mechanized Data Processing as a Tool for Better Management Information

By A. W. Hatch
Manager, Systems & Methods Dept., Ebasco Services Inc.

USUALLY, when anyone talks about accounting and other administrative functions of utilities, the emphasis is aimed at how to reduce these expenses. This has a powerful appeal, and certainly we need to keep everlastingly at it. However, I would like to review a different phase of this subject. Paper work and records and reports are the intelligence system of business. They are the primary channels for the raw material of facts out of which management manufactures its plans and policies, and day-to-day decisions. The better our information systems do this job, the more they can contribute to the growth, efficiency, and general health of the business. It seems timely, therefore, to consider not only the cost, but also how effective are our information systems; and how can they be made more so.

If we look back at the enormous expansion of the utility industry in the past decade, and ahead to the promise of further growth and technological progress, one thing seems certain—that is, a continuing increase in the problems of administration in keeping with constantly *enlarging* management responsibilities. Management is called upon today to deal with more and more highly specialized questions of economics, markets, rates, engineering and other areas. Expanded operations have brought larger organizations and greater delegation or decentralization of authority. This in turn breeds problems of communication and responsiveness to changing conditions.

• If business is to avoid the danger of wagging its tail in complacency while out-of-balance conditions develop, it must have adequate information and communication systems which alert management to action.

• Today, new concepts, new techniques and new equipment for business information processing can make important contributions to management. They offer opportunities not only to explore new territory, but also to retrieve more useful and more meaningful information from the raw material of data already available to us.

• These new developments lie in two areas. First, new and more powerful business machines and related techniques for data processing continue to appear at an amazing pace. And, along with and sometimes because of these machines, there is a lively and useful concentration on application of research techniques to business problems.

Yours is a dynamic industry, in a highly dynamic economy. The facts of yesterday may not hold true today or tomorrow. Yet psychologists tell us there is a tendency for people or organizations to think and act on the basis of past precedents which may no longer be accurate. The signals of change do not come through promptly enough, like the little dog in the jingle:

"There was a little dachshund once
So long it had no notion
How long it took to notify
Its tail of its emotion.
And so it happened when its eyes
Were filled with tears and sadness
Its little tail went wagging on
Because of previous gladness."

If business is to avoid the danger of wagging its tail in complacency, while out-of-balance conditions develop, it must have adequate information and communication systems which alert management to action.

I believe there is a great need, and an opportunity, to improve our business intelligence systems in all functional areas. Executives may now be staggering under the present quantity of information, but I have yet to find one who would not welcome an improvement in the quality.

It may be that the voluminous requirements of regulatory agencies as to accounting classifications, statistics, and reports have constituted a sort of roadblock to utilities. Many tend to make do with these traditional expressions of financial and operating information. There is nothing very dynamic about an FPC balance sheet, income account, or schedule of operating expenses, even when compared with the budget and previous years. True, they provide a broad historical perspective. From the standpoint of action, the best they can do is point up certain trends where a further fishing expedition may net something worthwhile.

Presented before the 29th Annual Executives Conference, Ebasco Services Inc., New York, N. Y., Dec. 2, 1958.

Reporting systems that merely record histories of accomplishments are only doing part of the job they could do. Sound information systems must evolve and adapt to the changing needs and processes of the organization. Today new concepts, and new techniques and equipment for business information processing can make important contributions to management. They are beginning to be put to use by utility companies. They offer opportunities not only to explore new territory but also to retrieve more useful and more meaningful information from the raw material of data already available to us.

Two Development Areas

These new developments lie in two areas. First, new and more powerful business machines and related techniques for data processing continue to appear at an amazing pace. Secondly, along with and sometimes because of these machines, there is a lively and useful concentration on the application of research techniques to business problems.

We have the example of research techniques in the scientific selection of load samples, quantitative measurements, and statistical inference in the projection of the measured samples to system-wide conclusions. In the field of machine developments as exemplified by the load study, we have the recorders which record load measurements and the translators which convert the data into language understandable by business machines for processing into useful form.

Some theorists today like to suggest that business information systems, under the impact of the new tools, can apply the same principles which underlie the ingenious automatic control systems found in some process industries, and which may be developing in power plant operation. In this sense automatic control is the principle by which information on system behavior is compared with a desired goal. Deviations between performance and that goal are fed back and used automatically to adjust system behavior.

To be sure, we are a long way from anything like an automatic office. However, there is a parallel in the application of the automatic control principle to our business information systems. Information feedback is, of course, an important element in any business system. The volume of more routine data and unwieldy systems have prevented greater application, or even recognition of the potential. The abstractions that could be drawn from our business information handling systems tend to be hidden under a mountain of paper work because we have not had the techniques or the tools to make use of it.

One of the important developments in connection with machines for processing business data is the so-called common language principle, coupled with devices for translating data from one language to another. This makes possible the integration of data processing so that data, once recorded in proper form at the source, can be handled by various machines for different purposes. It links together the different stages of processing so that human handling is minimized.

Bookkeeping machines, typewriters, adding machines, punched-card machines, electronic computers, and communication devices may now talk and understand a common language, or, where necessary, have available supplementary machines to translate from one medium to the other. The basic language is most frequently represented by punched holes in paper, one the familiar punched card, and another punched paper tape with perforations in a continuous paper strip.

Machines and Methods

Thus we can write an invoice, purchase order, or other business form on a bookkeeping machine, for example, and preserve any significant by-product data on a synchronized card punch or tape punch for subsequent machine analysis, summarization or other processing step. Devices automatically translate in either direction from punched tape to cards, or convert from these to magnetic tape in the operation of electronic computers, or permit transmission of data with automatic handling at both ends via teletype circuits or radio channels.

In this way, if a business system is properly designed for input of required information at the source, with appropriate numerical coding for subsequent analyses, and with a modern machine processing system, it is entirely practical and economical to recover any useful information input into the system. It can be summarized, classified, or analyzed, and used for different purposes largely by fast, simple, and relatively inexpensive machine methods.

The need for and rapid development of these common language techniques and equipment were largely brought about by the advances in punched-card and electronic computer equipment and communications networks for business purposes. Obviously its further link with control instrumentation in certain operating applications will be still another move in the direction of the theoretical automatic information system.

Horizons Widened

Along with these related developments, the applications horizon for punched-card and computer equipment is continually being widened. Essentially the gap between punched-card machines of a few years back and the electronic computers as they began to appear on the scene is being eliminated. The difference between various categories of equipment is one of degree in capability and performance, and of course in cost, but not in basic principle. Punched-card systems are already merging into computer systems as advances in equipment are made available by the manufacturers. Some of the companies represented here have installed progressively more advanced and capable small electronic computers, even if of limited programming capacity.

Modern data-processing machine systems, in their potential impact, are far more than merely high-speed tools for getting out the bills, the payroll, and other essential requirements. They provide the means for new analytical business studies and for retrieving much more meaningful information from our ordinary records than has usually been practicable or economical in the past.

Consider for a moment the extent of information which utilities record each day on countless pieces of paper that bulge from our filing cabinets and threaten to engulf us. We have in these records an enormous source of valuable information about our customers, our operations, costs, properties, and other factors affecting the business. We expend much time and money in recording meter reading, customer use and billing data, service and trouble orders, time tickets and

labor performance, materials use; so many facts it sometimes seems all our people must spend their working hours filling out forms and handling papers. It behooves us to make the most of these costly resources. With the aid of modern automatic equipment and with some imagination and ingenuity in designing our systems, much more of this data can be recaptured and put to work as useful operating and management tools.

Many-Purpose Data

One such example of these principles in action shows how data customarily recorded for one purpose can be coordinated and adapted to serve a by-product use in another area. This is the use of customer billing data to improve distribution transformer load supervision. In essence, machine records of customer energy use for billing purposes are keyed by code number to the particular distribution system area and transformer location. This permits summarization of the kwhr output of each transformer. This in turn is converted by formula to approximate kva load and thereby facilitates correction of overloaded transformers and secondaries in an orderly fashion.

Another simple but useful example is to be found in the analysis, by machine methods, of trouble, failures, and service interruption reports. Such records are, of course, nothing new. However, by designing uniform systems of reporting and evaluating service interruptions, with appropriate codes adapted to machine processing, companies have been able to provide analyses useful in evaluating quality of service, systems design, operating procedures, and equipment performance.

Limited Use

In the areas of cost control and labor performance there are extensive opportunities to provide more useful management information. We make numerous records of work performed, time required, and other pertinent details. Yet for the most part, the only effective use of this information, as far as management is concerned, is the summary which finally emerges showing dollar amounts in total by expense classifications. This, obviously, has limited usefulness.

By some simple modifications of our present reporting systems, it is possible in many cases to subdivide the account charges into more meaningful classifications which describe the kind of work done, provide quantitative statistics as to volume, and man-hours required, as well as dollar costs. A number of companies are doing this. Some are going even further to develop some standards of comparison. Experience has shown that cost reports in this detail, stripped of abstract accounting terminology to show actual work done and pinpoint responsibility, are much more effective in cost control.

Costs related to specific units of work performed can be much more significant than broad categories of expense divided by customers, or miles of line or other inadequate common denominators. They can develop greater cost-consciousness and competition among your divisions, and point up areas for methods improvement. They might well suggest changes in policy when a service call, a field collector's work, or other unit-job is related to the cost involved.

Sales, Marketing Problems

Turning to the sales and marketing problems of the industry, there is a further field for applying these same techniques to extract data useful in building our sales and revenues. The data we collect day in and day out for billing purposes can tell us much about our customer use characteristics and potentials for development. Supplemented, perhaps, with some sample analyses, this data can help pinpoint markets, kinds of customers and specific geographical areas for direction of promotional efforts, and so on. As heavier loads, such as space heating, become more significant in electric utilities, this type of customer use analysis will become increasingly necessary.

These are a few random samples of the potential for retrieving more useful information than we have in the past, and putting it to work in utility operations. A thorough study would disclose many more, and no doubt more profitable opportunities. Additional areas in which useful work is being done include:

1. Better inventory management and control by continuing analysis of usage, order quantities, etc.
2. Analysis of property retirements to determine mortality characteristics, calculation of depreciation, etc.
3. Analysis of equipment performance as a guide to purchasing, replacement policies, etc.
4. Derivation of construction cost data for cost control and estimating purposes.

Modern machine methods make these things possible and practical because they facilitate analysis and summarization and manipulation of data in different ways for different purposes, at high speeds and low cost. Without mechanization, the manual handling and rehandling of data would be impractical or prohibitive in cost.

Interest Renewed

Along with these developments in mechanization, there has been a resurgence of interest in the broader application of scientific methods to the study of business problems. These are not all abstractions of theoretical thinkers. Many of these techniques have very specific and down-to-earth application to aid management in the solution of utility problems.

Statistical sampling is not new, of course, but it is appropriately receiving more attention in the study of loads, markets, and customer motivation. It is finding application in meter testing practices. The same principles of statistical quality control in industry can be used to check labor performance, establish audit procedures, analyze cost deviations.

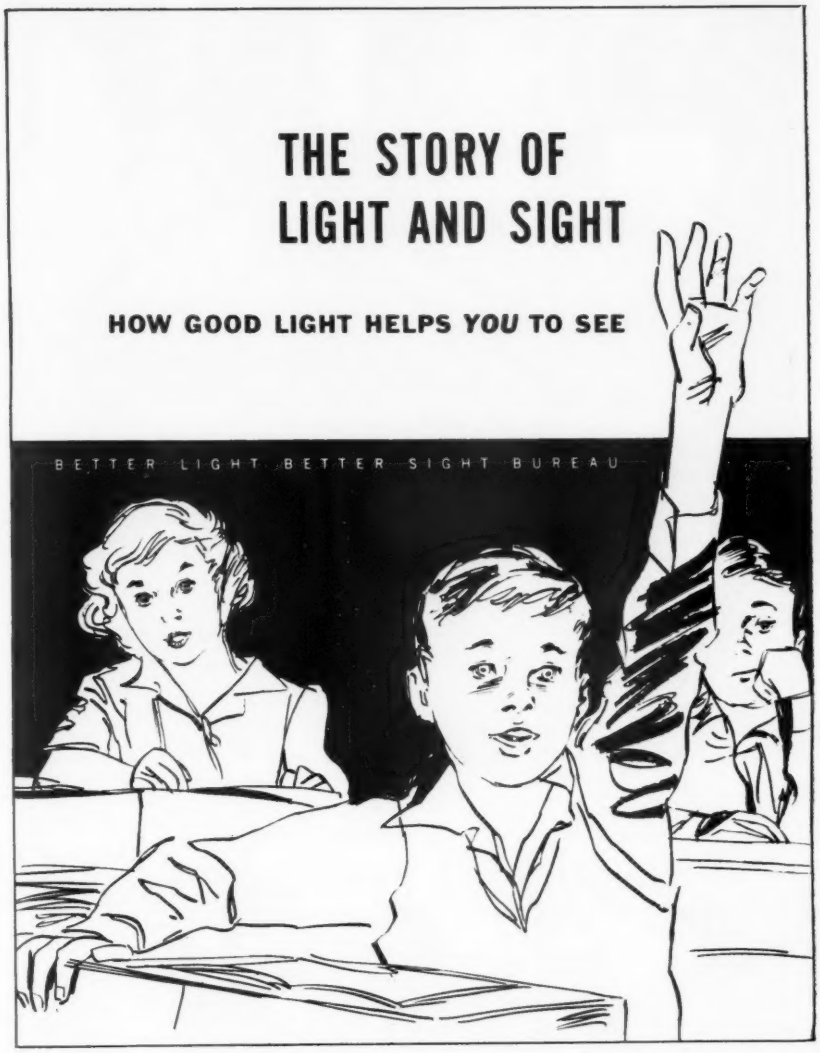
Advanced statistical and mathematical correlation techniques facilitate the preparation of load and sales forecasts. They are useful in the determination of optimum size of new generating units and similar studies.

Techniques of Simulation

Utilities are already familiar with the mathematical and engineering techniques of simulation by which problems are expressed in terms of mathematical models and manipulated with different variables to find the optimum solution. How these are being used today with modern computing equipment to effect improvement in economic load dispatching, power flow analysis, and system design studies is, I presume, fairly well known. There will be a widening horizon for the use of these same techniques to assist management with a variety of operating problem solutions.

'The Story of Light and Sight'

Better Light Better Sight Bureau Publishes a New Group of Aids for Teachers



"THE Story of Light and Sight," a new group of teaching aids for elementary school classes (4th, 5th and 6th grades), has just been published by Better Light Better Sight Bureau, it has been announced by Walter G. McKie, Bureau Chairman and General Sales Manager, Rochester Gas & Electric Corp.

Replacing an earlier set of aids bearing the same title, the new unit is designed to improve the pupil's understanding of the relationship of light and sight and to develop intelligent habits in the care of the eyes and in the use of light for easy seeing.

Only the Name Retained

In development for three years, the new "Story of Light and Sight" retains nothing from the earlier kit except the name. Developed in consultation with representatives of the National Education Association, the Department of Elementary School Principals (NEA) and the National Science Teachers Association, the new materials are based on an "activity approach," which provides actual experiences which are essential to real learning.

The new materials were prepared by the Bureau's School Service Committee under the Chairmanship of R. J. Miller, The Cleveland Electric Illuminating Co.

In the course of their preparation, the new aids were twice field tested in actual classrooms, providing exposure to over 600 pupils. Critical review by educators, lighting specialists and medical authorities checked the authenticity and correctness of educational methods, information on lighting and on the eyes and vision.

In many areas these new aids will be made available to schools by the local electric service company.

Formed in 1934

Better Light Better Sight Bureau is a national, non-profit organization formed in 1934 under the sponsorship of the electric industry to foster through educational means a better public understanding of the relationship of light and sight and of the contribution of good lighting to better seeing in schools, homes, offices and industry.

W. B. Sizemore, Jr., second from right, is awarded the EEI Medal for saving the life of a Duke Power Co. lineman. Also cited were R. B. Hardy, left, Certificate of Assistance, H. A. Coggins, second from left, and Heyward Jackson, right, Medal Miniatures. Also shown, center, are Walter D. Collins, whose life was saved, and D. W. Jones who is with Duke Power Co.

EEI Medals Are Pr

Joe Richards, third from left, and John C. Welborne, right, receive EEI Medals for a double rescue of Community Public Service employees. Also shown are James Ayres, R. G. Caldwell, John Caldwell. Mr. Ayres was awarded a Medal Miniature.

Mrs. Noel Troxell pins EEI Medal on her husband as Verne Moehling of Northwestern Public Service Co. holds the certificate.

FIFTEEN employees of 10 member companies recently were awarded Edison Electric Institute Medals for saving the lives of fellow workers and others who were suffering from electrical shock.

Presentation of these medals brings to 500 the number of such awards reported since the Medal was established in 1933 to encourage the use of the approved manual resuscitation techniques and to honor employees whose application of these techniques resulted in saving of human life.

Four of the persons revived by quick-thinking electric utility company employees were not fellow employees. One case involved the resuscitation of a New York subway passenger who had fallen onto the track bed and made contact with the third rail and was revived by a member of the meter and test department of Consolidated Edison Co. of New York, Inc.

These successful resuscitations, recognized with one of the industry's most honored awards, not only point up the employee's heroic action, but indicate the safety program's value.

The Medal is symbolic of the life-giving power that can be transmitted through the hands of a fellow worker. *Grati Dei per Manus Socii in Opere* —"By the Grace of God, Through the Hand of a Fellow Worker"—is inscribed on the Medal.

Clarence Monfore, second from left, receives EEI Medal for saving the life of Gordon Hawks, third from left, of Northwestern Public Service Co. Also shown are Walter Sinclair, center, who received a Medal Miniature, and, at right, Hylan Murphy, Lee Highland and William McMillan, who received certificates for assisting in the resuscitation.

re Presented to 15 for Saving Lives

Employees of 10 Member Companies Are Cited for Resuscitation Efforts Which Revived Shock Victims

W. B. Sizemore, Jr.

Duke Power Co.

Walter D. Collins and W. B. Sizemore, Jr., linemen for Duke Power Co., on the afternoon of June 13, 1957 were transferring primary wire to a new pole at Woodruff, S. C., when Mr. Collins contacted an energized wire. Mr. Sizemore caught Mr. Collins as he was falling from the wires and immediately began applying artificial respiration. H. A. Coggins and F. E. Morse, linemen, climbed the pole and assisted in rigging lines to lower Mr. Collins to the ground. Artificial respiration was applied throughout the operation. After the injured man was on the ground, John L. Dunn, groundman, J. D. Simmons, Jr., lineman, and Mr. Sizemore continued resuscitation, alternately, until an ambulance arrived. Heyward Jackson, line foreman, had given orders to get a doctor and ambulance. He instructed the crew and gave assistance in getting Mr. Collins to the ground. R. M. Teague, vehicle operator, and R. B. Hardy, groundman, helped to get the hand lines prepared to lower the shock victim to the ground. Artificial respiration was continued in the ambulance and at Woodruff Hospital for 2½ hours until an iron lung arrived from Spartanburg. Mr. Collins was unconscious for three days. He was discharged two weeks later. The story of this valiant fight to save a coworker's life was carried in the Spartanburg *Herald Journal*. Dwight B. Moore, Duke Safety Director, made these presentations: EEI Medal to Mr. Sizemore; Medal Miniatures to Messrs. Coggins, Morse, Simmons, Jackson and Dunn; Certificate of Assistance to Messrs. Teague and Hardy.

Noel E. Troxell

Northwestern Public Service Co.

Noel E. Troxell, journeyman serviceman with Northwestern Public Service Co., on Aug. 21, 1957, while on active duty with the South Dakota National Guard at Camp Roubaix, 35 miles from Rapid City, saved the life of another Guardsman who was shocked by lightning. During an electrical storm, lightning apparently struck a telephone line in the area of the command post of the camp. Because it was raining, several men were inside the tent where Mr. Troxell had arrived to get payroll signatures. Pvt. Owen Zanter was standing about three feet from the telephone when the lightning struck him. Before the private could fall, Mr. Troxell and Warrant Officer Donald F. Barta grabbed him. Mr. Troxell immediately began applying artificial respiration. After about six minutes Pvt. Zanter began to regain consciousness. A few minutes later Dr. H. E. Davidson, Lead, S. D., arrived. Col. Davidson was on active duty with the National Guard. Dr. Davidson said: "I am happy to commend Mr. Troxell for the excellent first aid work he performed. The immediate and efficient treatment for shock and resuscitation procedures applied to Pvt. Zanter were, I am sure, responsible for his rapid and complete recovery from a severe direct exposure to lightning." The EEI Medal was presented to Mr. Troxell by Vern Moehling, manager of the Wagner branch of Northwestern Public Service Co. Stories and pictures of Mr. Troxell's heroic performance appeared in numerous area newspapers.

JOE RICHARDS
JOHN C. WELBORNE
Community Public Service Co.

Raymond G. Caldwell, lineman, and John B. Caldwell, lineman's helper, Community Public Service Co., on the morning of Sept. 13, 1957, were members of a crew setting a new pole near Princeton, Texas. They were holding the pole when the winch line securing the pole contacted a 7200-volt line. Both men were rendered unconscious. John C. Welborne, lineman's helper, applied artificial respiration to Raymond G. Caldwell for about three minutes. James Ayres, lineman's helper, was applying artificial respiration to the other injured man at this time. Joe Richards relieved Mr. Welborne, who then relieved Mr. Ayres. In about five minutes John B. Caldwell was revived. Mr. Richards continued resuscitation application to Raymond G. Caldwell for several minutes, until he was revived. Howard R. Savage, vehicle operator, assisted in getting both injured men into position so that artificial respiration could be applied. Both men were treated by Dr. Jack L. Webb, Farmersville, Texas. Community Public Service Co. President R. L. Bowen made the following presentations: EEI Medals to Messrs. Welborne and Richards; Medal Miniatures to Messrs. Welborne and Ayres; and two Certificates of Assistance to Mr. Savage. Stories of this heroic double revival were published in numerous newspapers and in *The Communicator*, the utility's magazine.

HOWARD G. ANDERSON
The Washington Water Power Co.

On the afternoon of Dec. 10, 1957, James D. Olinger, groundman for The Washington Water Power Co., was working with a line crew under Howard G. Anderson, line foreman, near Spokane, Wash. Mr. Olinger reached into the back of a truck which had become energized through contact with a 13-kv energized line. Mr. Anderson, who was sitting in the cab of the truck, jumped to the ground and pulled Mr. Olinger from the truck by his coat tails. The groundman, suffering severe electrical shock, had lost consciousness. Immediately the line foreman began to perform resuscitation by the prone-pressure method. Duaine T. Walch, lineman, noticed that the resuscitation efforts were not successful as the injured man's body was very rigid. Mr. Walch struck Mr. Olinger several times in the back causing his body to become limp. Then the artificial respiration was effective. Mr. Walch held the injured man's tongue forward to allow the passage of air. In about three minutes the groundman began to breathe. Shortly afterward an ambulance arrived and Mr. Olinger was taken to St. Luke's Hospital in Spokane where he was treated by Dr. Clifford Smith. Dr. Smith said: "There is no question in my mind but that the prompt and effective first aid measures saved this man's life from electrocution." Kinsey M. Robinson, President of The Washington Water Power Co., presented the EEI Medal to Mr. Anderson and the Certificate of Assistance to Mr. Walch. Stories of this heroic action appeared in Spokane newspapers and in the company magazine, *The Illuminator*.

Howard G. Anderson, right, receives EEI Medal from Kinsey M. Robinson, President, The Washington Water Power Co. The Certificate of Assistance was presented to Duaine T. Walch, center, WWP lineman.

PATRICK J. O'CONNOR
Consolidated Edison Co. of New York, Inc.

Patrick J. O'Connor, a test supervisor in the meter and test department of Consolidated Edison Co. of New York, Inc., on the afternoon of Feb. 26, 1958, entered the York St. station of the Independent Subway System. He noticed a gathering of people observing the body of a man in the roadbed of the subway tracks, making contact with the third rail. Flames were coming from the man's body. Mr. O'Connor jumped to the roadbed and with a quick push moved the man away from the rail. He called to the platform for newspapers and insulated that part of the track, while holding the body of the man clear. Then he moved the man clear of the third rail, under the platform overhang. An incoming train was stopped by people on the platform. Shortly afterward Andrew Stanley, who was on the platform, came to the aid of Mr. O'Connor. The engineer had killed the power, so Mr. O'Connor and Mr. Stanley lifted the injured man and lowered him between the running rails. The man, later identified as Morris A. Epstein of New York City, was not breathing, and his eyes were open and vacant. No heartbeat could be detected. Mr. O'Connor determined that it would be almost impossible to safely turn Mr. Epstein over. He was lying on his back. The Con Ed employee decided to attempt to perform prone resuscitation in reverse. Placing both hands on the upper ribs just below the shoulders, Mr. O'Connor executed the lifting and lowering motion to the prescribed five-second count. After about one minute Mr. Epstein gasped, started breathing and his heartbeat returned. A detective summoned an ambulance and Mr. Epstein was taken to Holy Family Hospital where he received oxygen. He then was transferred to Kings County Hospital. His injuries were diagnosed as lacerations of the scalp, cerebral contusion and first and second degree burns of both upper arms. Mr. O'Connor was commended by the New York Transit Authority for his heroic action. The story of the dramatic rescue was pub-

lished in Con Ed's magazine *Around the System.* Mr. O'Connor received the EEI Medal.

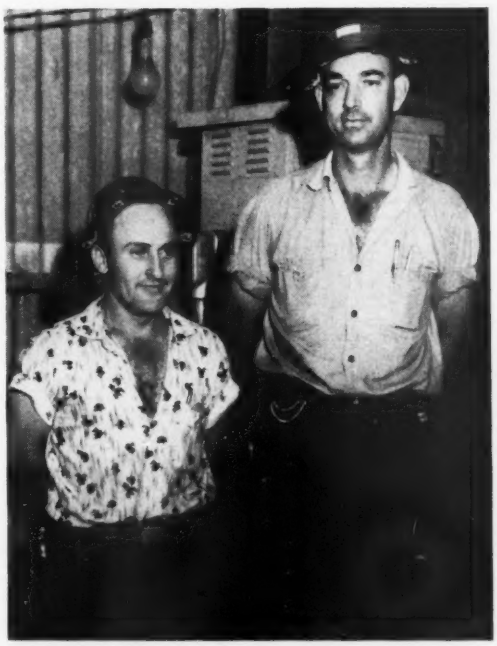
Patrick J. O'Connor, Consolidated Edison Co. of New York, Inc., test supervisor, receives the EEI Medal from Harry J. Bauer, Vice President. Mr. O'Connor rescued a man who had fallen into a New York subway road bed and had made contact with the energized third rail and a running rail.

ROBERT L. GRIFFITH
Baltimore Gas and Electric Co.

A line crew of the Baltimore Gas and Electric Co. on the afternoon of July 8, 1958, was walking through a densely wooded area in Anne Arundel County, Md., when William Simpkins, 11, voluntarily attached himself to the crew. Running ahead of the crew, he contacted a camouflaged energized foreign wire which was interwoven with the underbrush. Timothy L. George of the electric distribution department, seeing the boy fall, reached to pick him up and also was rendered unconscious when he touched the boy. Robert L. Griffith saw Mr. George fall and saw a puff of smoke. He directed Gilbert W. Grable, lineman, to put on his rubber gloves and sleeves. Mr. Grable cut the foreign wire and pulled Mr. George clear. Mr. Griffith grabbed the boy and dragged him away from the area. The boy was not breathing. Mr. Griffith immediately began applying artificial respiration. After about eight minutes, Eugene O. Anthony, lineman, relieved him. Hearing the boy gasp, Mr. Griffith pried open his mouth and held down his tongue. Mr. Grable, who had revived Mr. George, relieved Mr. Anthony after about 10 minutes. Dr. E. C. Walden, from the nearby Barrett School for Girls, arrived and applied ointment and bandages on the injured persons. Both were taken to the hospital. Dr. E. R. Shipley, Baltimore, who treated the boy said: "It is my feeling that this first aid prevented the death of this boy." A. L. Penniman, Jr., Baltimore Gas and Electric Co. Vice President, made the following presentations: EEI Medal to Mr. Griffith; Medal Miniatures to Messrs. Anthony and Grable. The story was published in *Folks,* the company magazine.

LEON M. SHEALY
South Carolina Electric & Gas Co.

On the afternoon of June 13, 1958, Leon M. Shealy, mechanic, and A. C. Turkett, lineman, South Carolina Electric & Gas Co., were assisting John MacMullen, Trans-weigh Co. representative, in the installation of a potentiometer at the McKeekin Station. Mr. MacMullen was in front of the open cabinet with both his arms inside the cabinet when Mr. Shealy noticed Mr. MacMullen shaking his head. He began to pull Mr. MacMullen's arm and it would not come free of the cabinet. Mr. Turkett then assisted in freeing the Trans-weigh representative. He lay on his back with his head held back, his arms across his chest and his knees drawn up. The two utility employees rolled the victim over and Mr. Shealy performed resuscitation. Soon Mr. MacMullen gasped and started to breathe. Artificial respiration was continued for another minute, until he was breathing normally. Mr. MacMullen was taken to the office of Dr. A. P. Thomas in Lexington, S. C. Mr. Shealy was presented the EEI Medal and a Certificate of Assistance was awarded to Mr. Turkett.



Leon M. Shealy, right, who received EEI Medal, is shown with A. C. Turkett who received a Certificate of Assistance. They are employed by South Carolina Electric & Gas Co., of Columbia.

Robert L. Griffith, second from right, is awarded the EEI Medal, and Medal Miniatures are presented to Eugene O. Anthony and Gilbert W. Grable, center, by Vice President A. L. Penniman, Jr., Baltimore Gas and Electric Co. They rescued a small boy who had received a shock.

The EEI Medal is presented by L. C. McClurkin, Savannah Electric and Power to (l. to r.) D. E. Gaiennie, Willis Teague, Dan L. Thomspson and Herman J. Brown. They saved the life of fellow employee James H. Williams, a lineman, who had made contact with an energized conductor.

DAN L. THOMPSON
WILLIS T. TEAGUE
DARYL E. GAIENNIE
HERMAN J. BROWN
Savannah Electric and Power Co.

On the afternoon of July 21, 1958, a line crew of Savannah Electric and Power Co. was transferring conductors to a new pole in Chatham County, Ga., when James H. Williams, lineman, contacted an energized conductor with both hands and the neutral line with both arms. Willis T. Teague, lineman, was working on the pole with Mr. Williams. Dan L. Thompson, lineman on the next pole, pulled the primary and neutral conductors together until he knocked the feeder off and Mr. Williams could be cleared of the primary. Mr. Teague, above Mr. Williams, came down the pole and began to administer pole-top resuscitation. Mr. Thompson and another lineman came from the next pole and rushed to assist Mr. Teague. Herman J. Brown, vehicle operator, had called for an ambulance and doctor. Artificial respiration was continued as Mr. Williams was lowered to the ground. When he reached the ground he was in a semi-conscious condition. D. E. Gaiennie, assistant superintendent, transmission and distribution, arrived at the scene. An ambulance arrived then and the injured lineman was placed on a stretcher and covered with a blanket. Resuscitation was continued for about 10 more minutes. Messrs. Teague, Thompson, Gaiennie and Brown administered artificial respiration. The rescue was directed by T. W. Long, line foreman. Mr. Williams was transferred to Memorial Hospital in Savannah, suffering severe shock and burns to both arms. It was necessary to amputate his left arm a few days later. Lee McClurkin, Savannah Electric and Power President, presented Medal Miniatures to: Messrs. Thompson, Teague, Gaiennie and Brown. The story of this heroic action was published in the *Savannah Evening News*.

DAVID H. ELMS, JR.
Public Service Electric and Gas Co.

John Gauld, Jr., lineman, and David H. Elms, Jr., chief lineman of a Public Service Electric and Gas Co. crew, were working at the top of a pole in Delanco Township, N. J., on the morning of Aug. 6, 1958, when the underside of Mr. Gauld's left forearm made contact with an unprotected conductor. His left leg contacted a 120-volt service wire. Mr. Elms heard the injured man cry out. He reached across and pulled the service wire away from Mr. Gauld's leg. Mr. Gauld slumped in his safety belt, unconscious and apparently not breathing. Mr. Elms moved around the pole so he could place Mr. Gauld across his safety strap and performed pole-top artificial respiration. After about five minutes Mr. Gauld started to breathe and regained consciousness. Mr. Elms directed Donald Kinkaide, vehicle operator, to radio for help and to send a line up the pole. Mr. Elms guided the injured lineman down the pole as he was lowered by other crew members on the ground. He also assisted in placing him in the ambulance and proceeded to Zurbrugg Memorial Hospital, Riverside, N. J., where he was attended by Dr. Benjamin

Lee for third degree burns on his left forearm and lower left leg. Edwin H. Snyder, Public Service Vice President, presented the EEI Medal to Mr. Elms and the Certificate of Assistance to Mr. Kinkaide. The story of this heroic rescue was published in the *Public Service News*, the company's newspaper.

Charles R. Jameson
The Cleveland Electric Illuminating Co.

Ralph C. Bunnell, apprentice lineman for The Cleveland Electric Illuminating Co., on the morning of Oct. 16, 1958, was working on a pole at Concord, Ohio, when his left shoulder contacted an energized wire and he became unconscious. Lineman Charles R. Jameson, on the pole with Mr. Bunnell, reached over and knocked him away from the wire. Mr. Jameson immediately began to apply pole-top artificial respiration and in about five minutes the injured man showed signs of recovery. Frank Shuffle, lineman, also climbed the pole and assisted in applying artificial respiration. Robert G. Ferrando, another member of the crew, assisted in getting Mr. Bunnell to the ground, where Clarence Edwards, foreman, continued resuscitation efforts until he regained full consciousness. Mr. Bunnell was taken to Lake County Memorial Hospital where he was examined by Dr. Howard Stephens. Dr. Stephens said: "The immediate and sustained artificial respiration given to this man by his two fellow workers definitely saved his life. Without this help given in the manner and with the speed and efficiency it was administered, Mr. Bunnell never would have survived." The EEI Medal was presented to Mr. Jameson and Medal Miniatures to Messrs. Shuffle and Edwards. The awards were presented by Ralph M. Besse, Executive Vice President of the company.

Clarence Monfore
Northwestern Public Service Co.

On the afternoon of Oct. 29, 1957, a crew of Northwestern Public Service Co. was cleaning insulators in a substation near Armour, S. D., under the direction of Clarence Monfore, division electric engineer. Gordon Hawks, engineering department, had climbed a ladder to clean insulators when he apparently slipped and contacted a 7200-volt energized line. Mr. Monfore, standing near the ladder, opened the switch to de-energize the line. As soon as the line was de-energized, Mr. Hawks fell to the ground, about 14 feet. With the help of other employees, the division electric engineer placed the injured man in position to administer artificial respiration. While Mr. Monfore performed resuscitation, Walter Sinclair and William McMillan, linemen, cleaned out Mr. Hawks' mouth and placed paper under his face to keep dirt out of his face and mouth. After about five minutes the injured man started breathing. Mr. Monfore then was relieved by Mr. Sinclair. Hylan Murphy, lineman, took Mr. Sinclair's place at the injured man's head. Dr. Ronald Price, Armour, S. D., and an ambulance arrived soon. Mr. Hawks was taken to the hospital in Armour. Dr. Price commended Messrs. Monfore and Sinclair for their "quick application of their training in artificial respiration." He added that "I believe that unless this had been done at once, Mr. Hawks would have died or at least had permanent damage to his brain." Jesse M. Olson, Yankton division manager, made the following presentations: EEI Medal to Mr. Monfore; Medal Miniature to Mr. Sinclair; Certificates of Assistance to: Messrs. Highland, McMillan and Murphy. Stories of this heroic action were published in the *Yankton Press and Dakotan*, and in *Ear*, the company magazine.

David H. Elms, Jr., third from right, receives EEI Medal from Vice President Edwin H. Snyder, Public Service Electric and Gas Co., for saving the life of a fellow worker. Donald Kinkaide, third from right, received the Certificate of Assistance. Also shown are John H. Thompson, Vice President, left; E. J. Thimme and C. P. Amos. Since the EEI Medal was established in 1933, 500 medal-winning resuscitation cases have been reported.

Accident Prevention Committee Meeting

- *Action to Reduce Electric Shock Accidents*
- *The New Electric Shock Subcommittee*
- *Mouth-to-Mouth Resuscitation Experiments*

I. R. DOHR
Chairman

THE Accident Prevention Committee held its 66th meeting Nov. 10-12 at the Sheraton-McAlpin Hotel in New York City, with 55 members and 61 guests in attendance. C. W. Meytrott, Vice President, Consolidated Edison Co. of New York, Inc., welcomed the group. He stated that at Con Ed safety comes first on the agenda at monthly meetings of the executive staff. The chairman of the board and all operating vice presidents review serious accidents.

In reporting on the 1957 accident rates and fatalities, S. H. Young felt the reports indicated that the fatal injuries are the result of a single mistake. Although men may make mistakes it is obvious that the use of rubber gloves and other protective equipment will prevent serious injury, he pointed out.

T. D. Hughston delivered the keynote remarks concerning the question, "What specific action do you think our committee should take to reduce electric shock accidents?" That there have been 968 fatal electric shock and burn accidents in 10 years to our own employees while they were working with the very commodity with which we make our living, stands as an indictment to our industry, to our safety profession and to ourselves, he told the group. Although these accidents occur under varying circumstances, there is a definite pattern into which most of them fall: first, a fundamental rule was violated; second, no one was looking directly at the injured when the accident occurred; third, there was no direct supervision at the time; fourth, the job was simple and routine; and fifth, little or no planning was done. Attitude was suggested as most important and Mr. Hughston cited examples to prove the influence of supervisory attitude on the attitude of the crews.

Mr. Dohr said the Committee should suggest a long-range, continuing program, not issue orders. This program must have appeal to be accepted, and it must be sold to motivate others. He emphasized the seriousness of the problem by pointing out that while one motor vehicle driver in 2000 is fatally injured, in our industry one of our workers in each 1000 exposed to electric shock suffers death from an electric shock or burn accident. Many comments from the membership were offered including ideas for making personal protective equipment rules mandatory, provision of guidance so presently concerned management can effectively help, and training.

The meeting was then divided into groups of six and by discussion each group developed and reported to the whole group a specific suggestion as to what the committee should do. All the groups were concerned with various phases of education and training. These suggestions were turned over to a new Electric Shock Subcommittee for study and recommendation.

Messrs. Bremner, Hatfield, Nanry and Naquin presented interesting descriptions of safety in action concerning motor vehicle safety, selling safety, a 30-day program and safety references in annual reports, respectively.

In his luncheon address W. E. Mange, Vice President, Consolidated Edison Co. of New York, Inc., emphasized the effectiveness of safety work by citing the reduction of the industry's frequency rate from 37 in 1924 to the 1957 rate of 6.39 per million hours worked per man.

An interesting exhibit of safety materials and devices was assembled by F. W. Jones.

Mr. Bremner's report for the Resuscitation Subcommittee included the showing of a movie on the mouth to mouth resuscitation medical experiments. Mr. Coleman felt that this method will be generally adopted as a standard method sometime in the future. Dr. Kouwenhoven said that there have now been 400 cases of successful defibrillation of human hearts using the ventricular defibrillating equipment developed at Johns Hopkins as part of the EEI research project. A manufacturer is working on a prototype of portable capacitor type of defibrillator.

Each of the subcommittee chairmen reporting indicated that substantial progress was being made in the areas of safety from Awards to the Z16 Standard Code.

Freedoms Foundation Honors EEI Program

"AMERICAN FREEDOM," the second in Edison Electric Institute's series of employee information programs, has been awarded the George Washington Honor Medal of the Freedoms Foundation for "an outstanding achievement in helping to bring about a better understanding of the American Way of Life during 1958." Announcement of the award was made on George Washington's birthday, Feb. 22, 1959, at Freedoms Foundation headquarters in Valley Forge, Pa.

The "American Freedom" program, developed for use by EEI member companies, tells the facts about freedom in three parts: How We Got Freedom, How We Can Lose Freedom, and How We Can Keep Freedom. Derived from authoritative sources, it is carefully designed to achieve a high level of employee interest and understanding through the use of an attractively illustrated booklet, a series of colored film strips, and a tested method of directing group discussions.

"The American Economic System," first in the EEI series of employee information programs, is a previous winner of the Freedoms Foundation award.

Prime Movers Committee Meeting

- *Metallurgy and Piping Task Force*
- *Problems of Instruments, Controls*
- *Progress of Nuclear Power Projects*

V. L. STONE
Chairman

THE Prime Movers Committee held its 96th meeting Feb. 2-4. For the first time in its 25-year history, the Committee visited Beaumont, Texas, where sessions were held in the auditorium of the Gulf States Utilities Co. This was the first Texas meeting of the Prime Movers Committee since 1950 and was attended by 103 members and guests.

Following the Committee's usual practice, the meeting was planned to allow for consideration of the many questions on the round table agenda. More than 130 topics covering a wide range of power station design and operating subjects had been submitted for discussion since the previous meeting last October. The morning session of the second day was devoted to Committee business, with subcommittee chairmen and project sponsors reporting on the status of their activities. The afternoon and evening of that day were spent inspecting three stations of the host company.

The group was welcomed by J. J. Morrison, Executive Vice President, Gulf States Utilities Co. In his opening address Mr. Morrison cited the history of his company's service area and described the development of the Gulf States Utilities system. He pointed out that maximum advantage must be taken of every opportunity to improve operating efficiency in view of rapidly increasing system loads and generating cost components.

A special welcome was extended to R. D. Dodson, Southwestern Electric Power Co.; M. C. Heffelman, Public Service Co. of New Mexico; J. D. Ristroph, Virginia Electric & Power Co.; and J. A. Stewart, Western Massachusetts Electric Co., who have joined the Committee since its last meeting. At present the membership of the Committee is 98. The Committee is organized into 12 subcommittees and a task force in addition to individual assignments to a number of members who serve as sponsors for projects or liaison members with other activities in which the Committee has an interest.

In the absence of W. C. Beattie, Chairman of the Air Pollution Subcommittee, J. M. Driscoll summarized the National Conference on Air Pollution held in Washington, D. C., during November, 1958. This conference was sponsored by the U. S. Public Health Service to review current knowledge on the causes and effects of community air pollution and to suggest plans of action directed toward the solution of these problems.

Boiler Auxiliaries Subcommittee

J. K. Bryan, Chairman of the Boiler Auxiliaries Subcommittee, reported that his group has undertaken a study on boiler feed pump arrangement and cycles, and feedwater heaters. The Boilers and Combustion Subcommittee, under the Chairmanship of R. A. Baker, is investigating several subjects including the status of boiler installations in service or under construction with low stack temperatures, and the problem of nonuniformity in practice regarding the calculation of heating surfaces in various furnace designs.

M. D. Engle, Chairman of the Fuel and Ash Handling Subcommittee, reported on the continuing fly ash studies of this group. J. W. Blake, Chairman of the Oil and Gas Power Subcommittee, presented a resumé of exhaust recovery cycle projects involving gas turbines.

Before reporting on the activities of the Metallurgy and Piping Task Force, E. H. Krieg, the Task Force Chairman, introduced Dr. J. W. Freeman of the University of Michigan who has recently succeeded the late Dr. A. E. White as Metallurgical Consultant to the Prime Movers Committee. Dr. Freeman reported on metallurgical research projects under the direction of the Steam Power Panel of the Joint ASTM-ASME Committee on the Effect of Temperature on the Properties of Metals underway at the University of Michigan Research Institute. EEI is participating in the financing of these programs on recommendation of the Prime Movers Committee.

In calling attention to the Metallurgy and Piping Task Force's activities, Mr. Krieg discussed the work of several technical organizations in the field of metallurgy which are followed for the Prime Movers Committee by the Task Force. Mr. Krieg reported that Section 1 of the Code for Pressure Piping, which is being rewritten with financial assistance from EEI, is progressing satisfactorily.

During the past year the Metallurgy and Piping Task Force has carefully investigated the activities of the Welding Research Council of the Engineering Foundation. Because welding fabrication procedures are called upon to meet ever-increasing technical challenges accompanying the use of higher combinations of steam temperature and pressure, a number of electric utility companies have been contributing individually to the Council. Based on the task force's study of the Council's program and the important developments resulting from its activities, the Prime Movers Committee voted to recommend that EEI contribute toward certain of the Council's research programs.

The Turbines and Condensers Subcommittee, under the Chairmanship of V. F. Estcourt, is continuing its project of providing Committee members with information on equipment outages. Results of a recent study indicate that there has been a downward trend in availability as turbine generator units have increased in size from 50 mw to 275 mw. The subcommittee's studies are directed toward establishing the correlation of trends in availability with such factors as unit size and steam conditions. Mr. Estcourt's group is also investi-

gating operating practices relating to rate of load change, and practices of companies represented on the Committee in obtaining peak capability by minor design modifications.

R. F. Andres, Chairman of the Power Station Chemistry Subcommittee, reported on the status of that group's investigation of electric utility company activities regarding the problem of iron oxide depositions in power station steam cycles. Mr. Andres announced that the next meeting of this 58-member subcommittee is scheduled for April 20-22 in Columbus, Ohio.

J. A. Lind, a one-man subcommittee on power station data, reported on data sheets distributed to the Committee since its last meeting. F. F. Mautz, Chairman of the Power Station Structures and Facilities Subcommittee, advised that his group will be prepared to report to the Committee in the near future the results of its study on shops and stores area allocation practice for single boiler turbine reheat installations.

The Station Instruments and Controls Subcommittee, of which W. W. Welch, Jr., is Chairman, has completed an investigation on problems and difficulties of instruments and controls. The Subcommittee is also preparing a report to the Committee on tie-line control. In conjunction with this Subcommittee's report, J. A. Reich discussed the Gulf States Utilities Co. central information system.

Plans of HTRDA

After summarizing the progress of nuclear power projects being conducted by companies represented on the Committee, J. N. Landis, Chairman of the Atomic Power Subcommittee, introduced Dr. Peter Fortescue, Chief, Research and Development Engineering, General Atomic Division, General Dynamics Corp. Dr. Fortescue discussed the helium-cooled, graphite-moderated reactor and the primary coolant system of the proposed nuclear plant of the recently organized High Temperature Reactor Development Associates, Inc. The proposal, now before the Atomic Energy Commission, calls for development, design, construction and operation of a 40,000 electrical kw-capacity plant with Bechtel Corp. as the engineer-constructor, and General Atomic Division of General Dynamics Corp. being responsible for the nuclear portion of the plant.

J. D. Williamson and G. P. Wilson represent the Prime Movers Committee on the System Planning Subcommittee of the Electrical System and Equipment Committee. Mr. Wilson submitted a report outlining the Subcommittee's several projects. The Subcommittee has a number of project groups concerned with subjects of interest to power station operating and design engineers.

Research Reports

Certain members of the Prime Movers Committee have been assigned to maintain liaison with research programs sponsored by EEI or to which the Institute contributes on recommendation of the Prime Movers Committee. T. T. Frankenberg reported on the ASME High-Temperature Steam Generation program, and A. C. Pasini, representing R. M. Van Duzer, advised of the status of the Extension of Steam Tables project under the direction of the ASME Research Committee on the Properties of Steam. R. A. Baker discussed the ASME Corrosion and Deposits from Combustion Gases project and W. W. Welch, Jr., reported on recent developments in the ASME Fluid Meters project. R. A. Baker also reported on the Joint ASTM-ASME Committee on the Effect of Temperature on the Properties of Metals. Mr. Baker, EEI representative on the Joint Committee, was recently elected vice chairman of this group.

T. M. Hotchkiss, who with P. H. Hartung represents the EEI on the BCR-EEI-AEIC Joint Research Advisory Committee, reported on the progress of the research program being conducted at BCR laboratories under the sponsorship of the three organizations. This research program is directed toward the reduction of sulphur in steam coals and the evaluation of methods for controlling atmospheric contaminants in flue gases.

J. G. Miller has been appointed to maintain liaison on behalf of the Prime Movers Committee with the Institute's Research Projects Committee. Mr. Miller summarized a recent meeting of research representatives of the EEI engineering committees with H. P. Seelye, Consultant of the Research Projects Committee, in which cooperation between the Institute's technical committees and the Research Projects Committee was discussed. Mr. Miller pointed out that the assistance of specialized EEI groups will be required in recommending suitable research projects, determining the desirability of proposed research programs for EEI sponsorship, and providing technical direction for Institute - sponsored work.

Based on a review by the Prime Movers Committee Executive Group, the Power Station Cost and Performance Data Subcommittee will be reactivated. This group had been disbanded in 1957 after presenting to the Committee the results of its investigation of production expenses, and turbine-generator and steam-generator overhauling and inspection manhour requirements. At the time of disbandment, the Subcommittee recommended that reconsideration of these subjects would be in order each two or three years. A chairman will be named to succeed E. C. Cawrse who had served in this capacity for a number of years.

During the afternoon of the second day the Committee visited the Riverside and Nelson Stations of the Gulf States Utilities Co. During the evening the group enjoyed a buffet as guests of the local power company at the Neches Station.

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Transmission & Distribution Committee Meeting

- *Underground Residential Distribution Systems*
- *Higher Secondary Voltages*
- *New Considerations in Overhead Construction*

W. M. PENNEY
Chairman

THE winter meeting of the Transmission & Distribution Committee was held Feb. 12 and 13 at the Morrison Hotel, Chicago, Ill., with 220 members and guests in attendance.

Underground

The opening session was sponsored by D. F. Tulloch, Chairman of the Underground Subcommittee.

T. C. Duncan reported that experience with 4,500 cast epoxy resin joints on 4-kv, self-supporting cable in New York has not been completely satisfactory. Most troubles have been due to poor centering of the connector in the mold form. T. E. Starrs noted similar experience with 80-cast epoxy resin vertical transition joints between paper-lead and rubber or rubber-neoprene, 4-kv cables in Newark. Both agreed that the cast epoxy resin is a satisfactory splicing material but that application methods need further improvement.

J. F. Hennessy reported that epoxy impregnated orlon tapes have been used successfully for several purposes in Baltimore. Principal applications to date include 36 sheath insulating inserts in 33-kv, paper-lead cable and 70 oil seals in 33-kv, paper-lead cable potheads. Other uses include transition joints and terminations on both low-voltage and 4-kv, paper-lead cables.

G. W. Grueneberg described an underground distribution system for an expensive residential subdivision in Midland, Mich. The primary is a looped, 4,800/8,320Y-volt, concrete-encased duct system, with provision for future three-phase supply, installed 42-in. deep behind the curb. Four-wire, 120/240-volt secondaries are buried 36-in. deep in sand under a 4-in. layer of concrete and run parallel to side lot lines. Precast, semi-buried transformer housings are large enough to accommodate two conventional transformers.

D. R. Jenkins outlined standard schemes for underground service to new residential subdivisions developed by the Commonwealth Edison Co. These are based on 10 and 18.6 kva demands for non-heating and heating customers, respectively. System features include buried, rear lot line 2.4- and 7.2-kv primaries with alternate feeds. Conventional transformers in semi-buried vaults or special transformers on pads serve 12 non-heating or eight heating customers. Uniform requirements which the subdivision builder must meet to obtain underground service have been prescribed.

E. J. Steeve reported that a Commonwealth Edison Co. study of pipe-type cable fault location indicates that a two-step procedure of approximate location followed by exact location is required. The Murray loop appears to be the best approximate location method for most types of faults and a combination of the sound-level and sound-directional methods offers a quick, simple means of localizing the fault.

D. F. Tulloch described use of polyethylene sleeves with silica gel inserts as an effective method of temporarily protecting exposed paper or varnished cambric cable insulation from moisture contamination.

General Engineering

The afternoon session of the first day was sponsored by C. E. Bathe, Chairman of the General Engineering Subcommittee.

L. W. Coombe discussed how the digital computer can help the engineer to solve typical transmission and distribution problems and described in detail how The Detroit Edison Co. used a computer to calculate economic guides for designing distribution systems for new housing subdivisions. He emphasized that programming techniques now available make it possible for the engineer to use these computers with a minimum of training and that less than a month's training will enable him to write acceptable programs in machine language where this is necessary.

W. H. Edman described how small variations from the normal light source position within a street lighting luminaire adversely affect lighting efficiency, uniformity and glare and advocated smaller tolerances in future standards for street lighting fixture components, especially lamps.

A major part of the session was devoted to discussion of the preliminary report of the EEI-NEMA Joint Committee on Higher Secondary and Utilization Voltages distributed in draft form for review and comment by the sponsoring organizations. T. C. Duncan outlined the recommendations of the report which would adopt 240/480-volt, single-phase and 240/416 Y-volt, three-phase systems as preferred standards for residential and general use with the 265/460Y-volt, three-phase system also recognized as an alternate standard for larger commercial and industrial loads.

A. S. Anderson presented a paper outlining results of Ebasco Services' studies leading to preference for 240 volts to neutral as the best higher level of utilization voltage for residential and commercial purposes. Most power company representatives commenting on the report concurred with its recommendations although a few felt that 240/416Y-volt and 265/460Y-volt systems should be recognized on an equal basis.

Some manufacturers' representatives voiced reservations about adopting 240/416Y volts as the preferred system when this preference is based on the assumption that the use of higher secondary voltage in residences will develop. H. H. Watson stated that product sections of NEMA now have the report under study.

Standards and Specifications

On behalf of F. C. Marschner, Chairman of the Standards and Specifications Subcommittee, H. E. Cody called on task force chairmen for reports of their activities.

W. H. Johnson reported a favorable letter ballot on the proposed new specification for wood moulding. The Timber Products Task Force is continuing work on standardization of pole framing, standing pole inspection procedures, reuse of poles and investigation of experience with lodgepole pine poles treated in accordance with Specification TD-100.

A report from L. J. Jacobi indicated that testing for the ASTM Wood Pole Research Program has been completed and that a final report will be ready in about six months.

A report from G. L. Wilkins noted that the AWPA research project to determine the ideal solvent for pentachlorophenol for use in treating southern pine poles is due to get under way this spring.

R. M. Grogan summarized results of the survey of the use of #4 aluminum service drop cable. The large number of varieties in use confirms the need to attempt standardization of as many features as possible.

C. E. Topping reported that the EEI-NEMA Joint Committee on Pole Line Hardware presently is working on proposed new specifications for insulated clevises, secondary extension brackets and aerial cable hangers and revisions of existing specifications for spool type secondary racks, rolled steel washers and steel clevises for guy strain insulators.

H. C. Bingham reported good progress toward completion of a proposed application guide for automatic circuit reclosers and sectionalizers.

J. Lummis announced publication of "Tentative Specifications for Connectors for Aluminum Conductors," EEI Publication No. 59-70. These specifications are based on the research project conducted by the Armour Research Foundation and are issued for trial use. It is hoped that experience with their use will provide a basis for an expanded, revised edition about a year hence.

A. T. Green reported a favorable ballot on EEI-NEMA suggested standards for future design of a street lighting luminaire head to receive an external, locking type unit control. The EEI-NEMA Joint Committee on Standardization of Street Lighting Equipment presently is concentrating on developing new standards for controls and revising existing standards for poles.

Safety

H. MacVaugh, Chairman of the Safety Committee, sponsored a session featuring an address by W. C. Bremner, Commonwealth Edison Co., and member of the EEI Accident Prevention Committee.

Mr. Bremner traced the history of industrial safety in the United States from its beginning until the present time. He also discussed some features of the Commonwealth Edison Co. safety program and described a number of the current activities of the EEI Accident Prevention Committee. He then presented a movie, "Rescue Breathing," which demonstrates the use of the mouth-to-mouth method of artificial respiration.

Overhead

R. Hicock, Chairman of the Overhead Subcommittee, sponsored a session featuring description of line construction changes being put into effect or under consideration by companies suffering severe line damage from the March 19-20, 1958, snow storm along the Middle Atlantic coast.

J. F. Hennessy reported that new construction in Baltimore will discontinue use of poles smaller than Class 5, conductors smaller than #2 ACSR, anchor plates smaller than 10-in., wood crossarm pins, side-tie insulators and suspension hooks to support transmission wires. These changes are in addition to others introduced as a result of the 1954 and 1955 hurricanes.

H. MacVaugh described numerous changes being made in Philadelphia. Principal transmission line improvements involve strengthening of ground wires and attachments. Subtransmission changes include replacement of all #1 copper and smaller conductors with #4/0 ACSR, use of a minimum of Class 2 poles and heavier guys and anchors. Each substation 8000 kw or larger will be supplied by at least one high-reliability line. The many distribution line changes include use of #1/0 ACSR or equivalent conductor for all new lines and the ultimate replacement of all #6 and #4 conductor. Series street lighting is to be eliminated wherever feasible.

G. A. Ewald outlined numerous changes under consideration by the Public Service Electric and Gas Co. These include stronger ground wires for 132-kv lines, higher strength, 26-kv subtransmission, reductions in the use of overhead series street lighting, lashed or spacer type aerial cable for new 4-kv, polyphase primaries, high-strength tree wire mounted directly on the pole for new single-phase, 4-kv primaries and reverse lay aerial cable for new secondaries. A sample area of 4-kv distribution has been rebuilt to the suggested standards as a trial.

C. E. Flahie described the Toledo Edison Co. program to reduce the variety and number of distribution transformers regularly purchased. In 1952 the company bought 43 varieties of three different primary voltages and stocks represented nearly 18 percent of the number in service. Purchases now have been reduced to seven sizes of one primary voltage. Stocks have been reduced to 4.8 percent of those in service and the goal is 3 percent. He emphasized the overall economies to the industry in reducing the number of standard ratings and suggested that the number of sizes 100 kva and below be reduced to four, preferably 10, 25, 50 and 100 kva.

R. Hicock reported that testing for the five-year tree growth control research project being conducted at Battelle Memorial Institute will start with the coming growing season.

Area Development Film Available from EEI

'PLANS for Prosperity,' a 27-minute motion picture produced by the EEI Area Devlopment Committee to help electric utility companies alert their communities to the need for long-range planning, is available from EEI.

The color, sound film is priced at $200 per print for member companies, and $250 per print for all others, FOB Springfield, Mass. A trailer of not more than three lines showing that the film is presented by the local utility company is available for $25. Send orders for the film to the Area Development Committee, EEI, 750 Third Ave., New York 17, N. Y. EEI does not handle the orders for the trailers. These should be sent directly to Bay State Film Productions, Box 129, Springfield, Mass., attention M. H. Reed.

People in Power

IRWIN L. MOORE

WILLIAM WEBSTER

IRWIN L. MOORE, President of the New England Electric System, has been elected Chairman of the Board and Chief Executive Officer, and WILLIAM WEBSTER, Executive Vice President, was elected President.

Mr. Moore, who will continue as the company's principal officer, has been president since 1941. A graduate of both Cornell and Massachusetts Institute of Technology, he was formerly president of International Hydro-Electric System and is one of the nation's foremost utility executives.

Mr. Webster has been the System's executive vice president since 1950. He is a graduate of the U. S. Naval Academy and MIT. He joined NEES in 1928 and has held executive positions in several System subsidiary companies. An authority on the peacetime uses of the atom, he is president of Yankee Atomic Electric Co., a pioneering group of New England utilities now building one of the country's first atomic electric plants at Rowe, Mass.

HAROLD E. AYER, President, Lynn Gas & Electric Co., has been named President, Suburban Electric Co., Malden, Mass. He will continue as President of Lynn G&E. Both companies are subsidiaries of the New England Electric System. In 1934 Mr. Ayer, a graduate of Norwich University with a degree in electrical engineering, joined the Lynn utility as a power sales engineer. He next became assistant to the general manager. In 1955 he was named vice president in charge of operations and in 1956 was elected executive vice president. He became president early in 1958.

Mr. Ayer is a director of the Essex Trust Co. and a member of the board of managers of Lynn Hospital.

JAMES M. OLIVER, Executive Vice President and General Manager, Georgia Power Co., has retired from active service. JOHN W. LASTINGER, Vice President in Charge of Public Relations and Advertising, has been named Executive Vice President and a director. JOHN F. PENNINGTON, Vice President in Charge of Engineering and Operations, was elected Vice President and General Manager.

Mr. Oliver was born in Dadeville, Ala., and attended Alabama Polytechnic Institute, graduating in 1915 with a degree in electrical engineering. Shortly after, he joined the Alabama Power Co., where he was employed in the construction and operating departments. In 1916 he was named operating engineer. He joined the Georgia Power Co. in 1927, as operating manager, and in 1944 was elected vice president in charge of operations. He was advanced to vice president and general manager in 1951. On January 1, 1957, he was elected executive vice president and general manager, and on the same date was elected a company director.

Mr. Lastinger attended Emory University. He joined the Georgia Power and Light Co. in 1926. In 1932 he was named division manager and in 1945 was promoted to vice president and division manager. In 1950 he became president of Georgia Power and Light; and when the properties of that firm were sold in 1957 to the Georgia Power Co., he was elected vice president and Valdosta division manager of Georgia Power. In October, 1957, he was named vice president in charge of public relations and advertising for Georgia Power.

Mr. Pennington has been vice president in charge of engineering and operations since July, 1957. He joined the company in 1918, serving in various capacities in construction and maintenance activities. In 1945 he was appointed general superintendent, transmission and distribution. He was named operating manager of the company in 1950, and three years later was elected vice president in charge of operations. In 1957 he was elected vice president in charge of engineering and operations.

The election of three new vice presidents has been announced by South Carolina Electric & Gas Co.

J. FRANK RADER, Chief Engineer, was elected Vice President and Chief Engineer; ARTHUR M. WILLIAMS Staff Counsel, was elected Vice President and Staff Counsel, and A. C. MUSTARD, General Commercial Manager, Electric Operations, was elected Vice President in Charge of Commercial Operations. F. R MCMEEKIN, Vice President in Charge of Operations, was named to the company Board and made a member of its Executive Committee. W. H. KENDRICK, Vice President in Charge of Commercial Operations and Industrial Relations, has resigned. HAROLD M. BRYANT, Personnel Director, was named Assistant Secretary.

Mr. Rader started his career with Metropolitan Edison Co. He later served with Central Vermont Hydro Corp. and Binghamton Light, Heat and Power Corp. He next went to Broad River Power Co., Columbus, S. C. Mr. Williams joined SCE&G in 1944 as personnel director and be-

came staff counsel in 1948. Mr. Mustard joined the utility in 1935 and filled a number of positions in the engineering department. He rose to the position of district manager and in 1954 was named general commercial manager, electrical operations. Mr. McMeekin joined a predecessor company in 1925. In 1951 he became operating manager and then vice president in charge of operations of SCE&G. Mr. Kendrick had been an executive of the company and its predecessor companies for more than 40 years. Mr. Bryant joined the utility in 1945 and was made personnel director in 1953.

B. J. DORSEY, Norfolk District Manager, Virginia Electric & Power Co., has been elected Northern Division Vice President of the utility. He succeeds JOHN W. HOWARD, retired.

Before joining VE&P in 1927 as a salesman at South Boston, Va., he served in the engineering department of Commonwealth Edison Co. From the position of salesman, he advanced to various supervisory positions including local manager at several stations; assistant district manager of the Eastern division; manager, electric department, Newport News, and district manager at Newport News, Charlottesville and Norfolk.

Mr. Dorsey studied engineering at Bliss Electrical School and took courses in engineering and utility management at the Chicago Central Station Institute and a management development course at Georgia Tech. He also attended Armour Institute in Chicago.

E. J. ARCHBOLD, Chief Electrical Engineer, Georgia Power Co., has been elected Vice President and Chief Engineer of the utility. He will be in charge of the company's general engineering department. A graduate of Purdue University in 1924 with a degree in electrical engineering, Mr. Archbold joined Georgia Power in 1927 as a draftsman. He served as design engineer, general design engineer and assistant chief engineer.

ROBERT F. PROBST, Secretary of The Connecticut Light & Power Co., has been elected a Vice President of the utility. Mr. Probst will continue in his present post. He joined CL&P in 1923 and served in various capacities in the accounting department before being elected assistant secretary in 1942. He was named secretary in 1951. Mr. Probst is a graduate of Hartford College of Law.

E. DONALD EARLY, Power Pool Manager, Southern Services, Inc., has been elected Vice President in Charge of Operating Services, and E. S. HARRISON, Chief Mechanical and Hydraulic Engineer for Georgia Power Co., was elected Vice President in Charge of Engineering for Southern Services. Mr. Early will be responsible for the power pool, rate and system planning activities of the Alabama, Georgia, Gulf and Mississippi Power Cos. and the Southern Electric Generating Co. of the Southern Co. system. Mr. Early joined a predecessor company of Southern Services in 1939. Mr. Harrison began his career with Tennessee Electric Power Co. in 1929 and was with it until it was dissolved in 1939.

KENNETH W. HASBROUCK has been elected Assistant Vice President of the New York State Electric & Gas Corp. Mr. Hasbrouck, Chairman of the EEI Rate Research Committee, will be manager of the company's rates and regulatory department and will assume the duties and responsibilities of the late William J. Foster, Jr. In the past 27 years, he has been in charge of the preparation of rate and special contract filings with the Public Service Commission and has testified before the PSC and the Federal Power Commission in cases relating to rates and franchises. Mr. Hasbrouck was graduated from Rensselaer Polytechnic Institute in 1926 with an electrical engineering degree. He joined the company a month later as a cadet at Oneonta, where he completed a course in management training. He was made assistant to the Oneonta district manager in 1927. In 1930, he became assistant to the vice president and general manager with headquarters in Oneonta. He was made assistant to the division manager in Geneva in 1931 and returned to Oneonta in 1932 as assistant to vice president in charge of regulatory matters. He has served in a similar capacity since 1939 in Ithaca.

EEI Announces Electrical Device to Treat Heart

SUCCESSFUL development of an electrical device for use in treating interruptions of normal heart rhythm during surgical operations has been announced by J. E. Corette, President of the Edison Electric Institute.

Closed-Chest Defibrillator

Known as a closed-chest defibrillator, the new device makes possible the restoration of normal heart rhythm by means of electric currents sent through the heart from electrodes placed on the surface of the chest.

"The development of a reliable and effective closed-chest defibrillator has been a result of research carried on at Johns Hopkins University under a grant from EEI, on recommendation of the Institute's Accident Prevention Committee. The work was begun in 1951 under the direction of Dr. W. B. Kouwenhoven and with the cooperation of the Hopkins Schools of Medicine and Engineering," Mr. Corette said.

Use of Device

The new device is used in cases where normal rhythm of the human heart is interrupted and thrown into a twitching state known as ventricular fibrillation. In this condition the circulation of blood ceases, although the victim may continue to gasp for breath for about a minute. The human heart rarely recovers spontaneously from ventricular fibrillation.

Causes of Condition

The condition can occur as a result of the administration of an anaesthetic to a patient allergic to it, from the mechanical touching of the heart or the lowering of body temperature during certain types of surgery, or from electric shocks.

Work toward the development of a small portable defibrillator for use in hospital wards and in the public utility field is being carried on at Johns Hopkins University under a supplemental grant which was provided by EEI two years ago, Mr. Corette said.

EDISON ELECTRIC INSTITUTE OFFICERS AND COMMITTEES

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ALLEN S. KING, *Vice President*.....Northern States Power Co., Minneapolis, Minn.
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A. B. MORGAN, *Secretary and Assistant Managing Director*.....750 Third Ave., New York, N. Y

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(Terms expiring 1960)

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